CANAL RECORD

VOL. - 14

1920 - 1921

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THE PANAMA CANAL RECORD

PUBLISHED WEEKLY UNDER
THE AUTHORITY AND SUPERVISION OF THE PANAMA CANAL

AUGUST 18, 1920, TO AUGUST 10, 1921

VOLUME XIV
WITH INDEX

THE PANAMA CANAL
BALBOA HEIGHTS, CANAL ZONE
1921

THE PANAMA CANAL PRESS
MOUNT HOPE, CANAL ZONE
1921.

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THE PANAMA CANAL RECORD

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at Cristobal, C. Z., under the Act of March 3, 1879.

Volume XIV. Balboa Heights, C. Z., August 18, 1920. No. 1.

Commercial Traffic in First Six Years.

The Panama Canal completed 6 years of operation at the close of business on August 14, 1920, having been opened to commerce on August 15, 1914. During the 6 years the total number of commercial ships making the transit was 10,573. Their aggregate net tonnage, according to the rules of measurement of The Panama Canal, was 34,540,266. The cargo they carried totaled 40,313,629 tons of 2,240 pounds.

This traffic was made up of 4,934 ships, of 16,145,434 net tons, carrying 16,576,778 tons of cargo from the Atlantic to the Pacific, and 5,639 ships, of 18,394,832 net tons, with 23,736,851 tons of cargo from Pacific to Atlantic. Details of the traffic by calendar and fiscal years are presented in the table on pages 2 and 11.

The Canal was opened shortly after the beginning of the war in Europe. This and the interruptions of traffic due to slides, the last serious one of which came to an end on April 15, 1916, interfered with the normal use of the Canal in its earlier years, and government requisitioning, high freights, scarcity of tonnage, financial and industrial uncertainties, and fueling difficulties have since the signing of the armistice delayed the establishment of what may be considered the conditions of unrestricted commerce. A distinct and healthy growth of the traffic is, however, discernible, especially in the calendar year 1919 and the fiscal year 1920. Each of these, in ships and net tonnage, exceeded all previous years; and the fact that the traffic in the month and a half of the current fiscal year, beginning July 1, 1920, has been at a rate greater than that of any of the preceding years, indicates a continuing upward trend.

Adequate Stock of Diesel Oil.

THE PANAMA CANAL, BALBOA HEIGHTS, C. Z., August 13, 1920.

To all steamship agents and all oil companies—Until further orders, rules recently established for bunkering vessels will not be considered to extend to the sale of Diesel oil, as the quantity on hand on the Isthmus would appear to be adequate for fulfilling all requirements.

The Port Captains have been instructed in accordance herewith.

E. P. JESSOP,
Marine Superintendent.

From Seattle to Chicago.

The steamship *Iroquois*, passing through the Canal on July 4, was bound from Seattle to Chicago, in ballast. She is a ship of 787 net tons, Panama Canal measurement, 214 feet long by 34 feet beam, and was drawing 13 feet of water at time of transit.

Commercial Traffic in First Six Years.

PERIOD	ATLANTIC TO PACIFIC.			PACIFIC TO ATLANTIC.			TOTAL.		
	Vessels.	Panama Canal net tonnage.	Tons cargo.	Vessels.	Panama Canal net tonnage.	Tons cargo.	Vessels.	Panama Canal net tonnage	Tons cargo.
Calendar year 1914	177	633,086	736,082	174	648,033	1,009,252	351	1,281,119	1,745,334
December 31, 1914, to June 30, 1915	345	1,218,735	1,351,306	376	1,272,313	1,829,505	721	2,491,048	3,180,811
Fiscal year 1915	522	1,851,821	2,087,388	550	1,920,346	2,838,757	1,072	3,772,167	4,926,145
June 30, 1915, to December 31, 1915	227	736,510	719,594	201	645,954	993,729	428	1,382,464	1,713,323
Calendar year 1915	572	1,955,245	2,070,900	577	1,918,267	2,823,234	1,149	3,873,512	4,894,131
December 31, 1915, to June 30, 1916	169	535,142	654,463	163	467,678	695,585	332	1,002,820	1,350,048
Fiscal year 1916	396	1,271,652	1,374,057	364	1,113,632	1,689,314	760	2,385,284	3,063,371
June 30, 1916, to December 31, 1916	442	1,412,263	1,394,412	448	1,419,029	2,094,036	890	2,831,292	3,488,448
Calendar year 1916	611	1,947,405	2,048,875	611	1,886,707	2,789,621	1,222	3,834,112	4,838,496
December 31, 1916, to June 30, 1917	437	1,413,197	1,566,177	479	1,573,118	2,028,420	916	2,986,315	3,594,597
Fiscal year 1917	879	2,825,460	2,960,589	927	2,992,147	4,122,456	1,806	5,817,607	7,083,045
June 30, 1917, to December 31, 1917	485	1,448,404	1,507,628	559	1,789,114	2,325,455	1,044	3,237,518	3,833,083
Calendar year 1917	922	2,861,601	3,073,805	1,038	3,362,232	4,353,875	1,960	6,223,833	7,427,680
December 31, 1917, to June 30, 1918	429	1,295,557	1,130,859	595	2,049,867	2,571,853	1,024	3,345,424	3,702,712
Fiscal year 1918	914	2,743,961	2,638,487	1,154	3,838,981	4,897,308	2,068	6,582,942	7,535,795
June 30, 1918, to December 31, 1918	421	1,186,515	1,087,968	627	1,883,583	2,503,822	1,048	3,070,098	3,591,790
Calendar year 1918	850	2,482,072	2,218,827	1,222	3,933,450	5,075,675	2,072	6,415,522	7,294,502
December 31, 1918, to June 30, 1919	440	1,488,494	1,652,902	540	1,563,331	1,678,731	980	3,051,825	3,331,633
Fiscal year 1919	861	2,675,009	2,740,870	1,167	3,446,914	4,182,553	2,028	6,121,923	6,923,423
June 30, 1919, to December 31, 1919	529	1,843,501	1,812,888	625	2,023,823	2,323,646	1,154	3,867,324	4,136,534
Calendar year 1919	969	3,331,995	3,465,790	1,165	3,587,154	4,002,377	2,134	6,919,149	7,468,167

(Continued on page 11, column 1.)

Cruiser "Kasuga" on Her Way from New Orleans.

The Japanese cruiser *Kasuga* is expected to arrive at Cristobal on August 22 from New Orleans. Arrangements have been made for an official reception, with the customary calls and sightseeing trips for the officers and crew, on August 23, 24, and 25.

Holland-American Line Service to West Coast.

Cable advice from the Washington Office of the Canal states that a deposit has been made to cover tolls and other charges on the steamship *Emdijk* of the Holland-American Line. This is believed to be the vessel which sailed from Rotterdam for San Francisco, via New York and Philadelphia, in July, beginning a projected three-weekly service of the line between Rotterdam and San Francisco, Portland, and Seattle.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending August 14, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Urubamba	Peruvian Line		August 8		840
Caribbean	Panama Railroad Cattle Industry		August 8		44
Pastores	United Fruit Co	August 8	August 8	24	22
Crynssen	Royal Dutch West India Mail	August 8	August 9	14	216
Jamaica	Pacific Steam Navigation Co		August 9		999
Manavi	Pacific Steam Navigation Co	August 8	August 13	590	669½
Inca	Pacific Steam Navigation Co	August 8	August 13	510	(*)
Ulua	United Fruit Co	August 9	August 10	488	11
Point Lobos	Pacific Mail Steamship Line		August 10		494
Rosana	Alberto Fait		August 10		50
Laura C. Hall	Pacific Metals Corporation		August 11		10
Parismina	United Fruit Co	August 9	August 11	750	6
Gen. G. W. Goethals	Panama Railroad Steamship Line	August 9	August 12	1,550	62
Patrician	Harrison Steamship Line	August 10	August 12	805	(*)
Abangarez	United Fruit Co	August 11	August 11	½	7
Huasco	Chilean Steamship Co	August 12		271	
Salvador	Pacific Steam Navigation Co		August 12		1,182
Peru	Pacific Steam Navigation Co		August 13		1,100
Volga	Pacific Steam Navigation Co	August 12	August 13	80	(*)
Caribbean	Panama Railroad Cattle Industry	August 12		350	
Balboa	Colombian Maritime Co	August 12		592	
Cristobal	Panama Railroad Steamship Line	August 12		3,424	
Caldas	Caribbean Steamship Co	August 13	August 13	55	(*)

* No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending August 14, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Urubamba	Peruvian Line	August 8	August 8		67
Manavi	Pacific Steam Navigation Co	August 8	August 8	14	
Jamaica	Pacific Steam Navigation Co	August 9	August 9		37
Point Lobos	Pacific Mail Steamship Co	August 10	August 10	117	41
Laura C. Hall	Pacific Metals Corporation	August 11	August 11		52
Salvador	Pacific Steam Navigation Co	August 12	August 12		12
Manavi	Pacific Steam Navigation Co	August 13	August 13		1
Balboa	Colombia Maritime Co	August 12	August 13	1	
F. D. Asche	Standard Oil Co	August 10	August 11	12,400	
Rosana	Alberto Fait	August 11	August 12	15	

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight August 14, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship	Arrived at port		Entered Canal		Completed transit		Cleared for sea		Nationality	Line	Length	Beam	Salt water draft	From—	For—	Cargo	Tons	Panama Canal tonnage	
	Day	Hour	Day	Hour	Day	Hour	Day	Hour										Gross	Net
Donna (a)	6	7.50	8	6.12	8	15.02	12	13.35	American	Ecuador Brewing Co	84.0	19.0	9.0	Habana	Guayaquil	Ballast		98	22
Urubamba	3	17.45	8	6.21	8	15.21	8	23.46	Peruvian	Peruvian Line	381.2	41.1	20.1	Cristobal	Callao	General	840	4,863	2,951
Tres Hermanos	4	12.15	8	6.30	8	15.49	8	17.00	Peruvian	Moyano & Co	206.0	33.0	14.6	Norfolk	Antofagasta	Coal	1,223	1,331	870
Saint Teath (a)	7-13	21.20	8	6.50	8	12.49	9	6.32	British	British Government	135.0	29.0	13.0	High seas	Arica	Ballast		450	105
San Joaquin	8	8.40	8	8.02	8	17.23	8	18.37	Norwegian	W. Wilhelmsen	425.0	57.6	26.6	Point Lobos	Antofagasta	Fuel oil	9,400	7,059	5,081
Santa Olivia	8	5.36	8	9.17	8	18.05	8	22.09	American	Atlantic & Pacific S. S. Co	420.0	53.0	23.5	New York	Valparaiso	General	4,530	6,736	4,883
Crown of Galicia	8	14.42	9	6.10	9	13.31	9	14.45	British	T. & J. Harrison	399.0	52.0	21.0	Liverpool	Seattle	General	4,500	5,714	4,125
Mina Brea	9	1.53	9	7.08	9	15.05	9	22.34	British	International Petroleum Co	360.0	49.0	24.5	Port Lobos	Pisagua	Crude oil	5,000	4,437	2,688
Jamaica	5	18.00	9	8.58	9	16.06	9	21.28	British	Pacific Steam Navigation Co	220.0	34.0	14.6	Cristobal	Tumaco	General	999	1,187	622
Point Lobos	7	21.55	10	6.05	10	13.46	11	7.35	American	Pacific Mail Steamship Co	289.0	44.0	19.6	Baltimore	San Francisco	General	2,569	2,895	1,967
Rosana	7	16.56	10	6.15	10	14.15	11	10.37	Costa Rican	Alberto Fait	112.0	25.0	7.0	Cristobal	Puntarenas	Gasoline	50	256	185
Costigan	8	18.12	10	6.34	10	14.05	10	15.45	American	United States Shipping Board	400.7	54.2	19.6	New York	Soerbajo	General	3,417	6,529	4,728
F. D. Ascho	9	16.00	10	6.40	10	15.17	....	(e)	American	Standard Oil Co	461.5	60.0	26.3	Tampico	Balboa	Crude oil	12,400	8,606	6,525
West Modus	8	21.58	10	6.45	10	16.01	10	17.00	American	United States Shipping Board	409.8	54.2	25.1	New York	Cavite, P. I.	Coal	7,179	6,589	4,838
Barges 26 & 28	....	....	10	7.15	10	17.04	....	(e)	American	Panama Railroad Steamship Line	....	....	....	Cristobal	Balboa	General	....	169	169
Lake Fluvanna	10	17.15	11	6.23	11	14.00	11	15.10	American	United States Shipping Board	251.0	43.6	12.8	New Orleans	Arica	Ballast	....	2,501	1,599
Saint Jean	7	21.00	11	6.24	11	16.17	11	17.20	French	Cie. Gle. Transatlantique	397.0	50.0	18.0	Havre	Valparaiso	General	1,091	5,849	4,081
St. Blazey (a)	7	15.52	11	6.30	11	12.38	11	14.22	British	British Government	135.0	29.0	14.0	Bermuda	Arica	Ballast	....	447	101
Laura C. Hall b	7	16.47	11	7.05	11	14.45	12	22.10	British	Pacific Metals Corporation	81.0	25.0	9.6	Cristobal	Buenaventura	General	10	130	69
Maipo	10	17.25	11	7.15	11	16.00	14	19.48	Chilean	Chilean Government	388.0	51.0	29.0	Norfolk	Valparaiso	Coal and general	7,770	6,385	4,572
La Cabiria (c)	11	6.00	11	6.00	11	8.15	....	(f)	Panaman	Bernardo Bergaro	....	....	....	Cristobal	Gatun Lake	....	....	20	18
Harima Maru	11	18.12	12	6.15	12	13.45	13	16.36	Japanese	Kobe Kier Co	492.0	45.0	25.7	Philadelphia	Yokohama	General	3,800	4,986	3,599
Los Angeles	12	2.08	12	6.49	12	15.46	13	7.36	American	Union Oil Co	435.0	56.0	28.0	Palo Blanco	Oleum, Cal	Crude oil	(g)	7,380	5,195
Salvador	5	13.00	12	8.50	12	14.58	12	17.17	British	Pacific Steam Navigation Co	215.0	33.0	15.0	Cristobal	Champerico	General	686	1,213	692
Inca	8	18.08	13	6.09	13	13.03	13	19.12	British	Pacific Steam Navigation Co	360.0	43.0	19.0	New York	Guayaquil	General	2,844	3,952	2,751
Princess	12	15.18	13	6.11	13	13.05	13	13.58	Peruvian	E. Leith	165.0	26.0	13.0	Halifax	Callao	Briquette coal	125	589	188
St. Hilary (a)	12	6.27	13	6.20	13	12.55	14	7.00	British	British Government	135.3	29.1	14.8	London	Arica	Ballast	....	443	99
Manavi	8	18.00	13	6.36	13	13.49	13	18.37	British	Pacific Steam Navigation Co	216.0	35.1	13.3	Cristobal	Guayaquil	General	669	1,357	884
Peru	5	17.35	13	10.14	13	17.08	13	20.06	British	Pacific Steam Navigation Co	350.0	43.1	18.0	Cristobal	Valparaiso	General	1,100	4,095	2,655
Nevada	13	15.00	14	6.20	14	14.10	14	16.14	Danish	United Steamship Co	361.9	50.2	25.0	Norfolk	Chile	Coal	5,631	....	....
Genoa Maru	13	18.13	14	6.28	14	14.53	14	15.52	Japanese	Nippon Yusen Kabushiki Kaisha	425.0	54.0	28.0	New York	Yokohama	General	7,313	6,832	5,174
Niceto de Larrinaga	13	18.25	14	6.58	14	15.10	14	17.08	British	Larrinaga Steamship Co	458.0	56.0	16.0	Baltimore	Astoria	Ballast	....	....	....
Mahia	14	6.58	14	8.08	14	15.42	14	17.45	British	Shaw, Saville & Albion Co	476.0	63.0	27.6	New York	Brisbane	General	7,600	11,026	7,912
Rene Kerviler d	13	13.30	14	13.12	....	....	....	....	French	Societe Gen. de Armement	209.0	35.0	13.0	Nantes	San Francisco	Ballast	....	....	....

(a) Tug. (b) Power schooner. (c) Launch. (d) Bark. (e) Returned north through Canal. (f) Went to Gatun Lake only. (g) 80,000 barrels.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Stanley Dollar.	8	5.00	8	7.41	8	14.10	8	17.20	American...	Robert Dollar	288.8	44.6	22.6	San Francisco.	New York	General	3,500	3,460	2,404
Alsace	8	5.00	8	7.22	8	15.20	9	15.45	French	A. D. Bordes & Son	400.3	52.4	24.0	Taltal	Cristobal (*i*)	Nitrates	7,069	5,879	4,156
Lake Foxboro..	7	23.40	8	9.13	8	17.18	8	19.40	American...	United States Shipping Board	251.0	43.6	24.0	Iquique	San Juan, P.R.	Nitrates	3,600	2,754	1,722
Manavi	8	6.25	8	10.32	8	18.00	13	6.36	British	Pacific Steam Navigation Co.	216.0	35.1	12.8	Guayaquil	Cristobal	Produce	590.16	1,357	884
Port Lyttleton..	8	13.05	9	6.33	9	15.18	9	17.55	British	Commonwealth and Dom. Line.	450.0	55.2	25.0	Wellington	London	General	6,414	8,219	5,824
Lorain	8	18.14	9	8.11	9	16.30	10	11.12	American...	United States Shipping Board	395.5	55.0	27.0	Sydney	New York	General	7,300	7,288	5,256
Vulcan (*h*)	9	6.30	9	8.54	9	17.20	9	21.55	American...	United States Navy	385.0	53.0	18.0	San Diego	Norfolk	Ballast		5,803	3,140
Lake Fillion	9	6.40	9	9.34	9	18.05	10	12.16	American...	United States Shipping Board	251.0	43.6	24.0	Iquique	Philadelphia	Nitrates	3,611	2,823	1,740
West Cahokia...	9	7.00	9	9.40	9	18.48	10	3.50	American...	United States Shipping Board	410.5	54.0	23.0	Ilo Ilo	Philadelphia	Sugar	7,126	6,622	4,882
La Habra	7-28	7.45	9	10.50	9	19.35	9	20.00	Norwegian..	W. Wilhelmsen	425.8	57.0	15.0	Iquique	Tampico	Ballast		7,053	5,093
Etna Maru	9	16.00	10	6.34	10	14.50	10	17.00	Japanese	Kokusai Kisen Kaisha	415.0	55.5	27.6	Formosa, Japan	New Orleans	Sugar	9,278	7,215	5,339
Cathlamet	9	17.00	10	6.56	10	15.15	11	9.34	American...	United States Shipping Board	410.5	54.2	23.0	Wellington	London	General	6,380	6,755	4,883
Santa Tecla	9	14.30	10	7.35	10	16.05	10	19.20	American...	W. R. Grace & Co	289.6	40.0	22.3	Taltal	New York	Nitrates and gen	3,431	2,835	1,827
Maple Branch..	9	22.30	10	9.25	10	17.25	10	19.15	British	F. & W. Ritson	400.0	52.0	23.0	Antofagasta	Antwerp	General	6,670	5,618	4,105
Toyooka Maru.	10	7.30	10	11.04	10	18.30	10	18.30	Japanese	Nippon Yusen Kaisha	445.0	58.0	24.7	Hongkong	New York	General	9,829	7,747	5,556
West Jappa	10	10.45	11	6.54	11	15.10	11	18.27	American...	United States Shipping Board	410.5	52.2	25.5	Manila	New York	General, sugar	7,500	6,755	4,873
Republic	10	15.00	11	7.04	11	17.08	11	17.38	American...	Chile Steamship Co	341.0	49.1	23.6	Mejillones	Philadelphia	(*j*)	5,803	4,623	3,372
Santa Paula	11	3.06	11	7.43	11	15.35	11	19.55	American...	W. R. Grace & Co	404.6	53.9	28.0	Valparaiso	New York	Nitrate of soda	8,820	6,744	4,825
Sinasta	10	17.55	11	9.48	11	18.27	11	21.00	American...	United States Shipping Board	402.5	53.0	26.0	Portland	Liverpool	Wheat and flour.	7,545	6,566	4,819
F. D. Asche	10	15.17	12	7.25	12	14.05	12	14.05	American...	Standard Oil Co. of N. J	461.5	60.0		Balboa	Tampico	Ballast		8,606	6,525
Huasco	12	4.25	12	8.20	12	15.25	16	8.08	Chilean	South American Steamship Line	379.6	44.3	21.0	Valparaiso	Cristobal	General	271	4,552	3,182
Essequibo	12	3.20	12	8.54	12	16.05	13	7.25	British	Royal Mail Steam Packet Co.	449.4	57.8	24.6	Valparaiso	New York	General	2,627	9,037	6,089
Balboa	12	8.12	12	11.20	12	17.47	16	6.00	American...	Colombian Maritime Co	190.0	29.1	12.3	Buenaventura	Cristobal	General	592.85	741	350
Statesman	12	19.00	13	7.51	13	15.40	13	16.66	British	Thomas Jas. Harrison	423.0	53.8	26.5	San Francisco.	Liverpool	General	7,977	6,361	4,592
Lake Berdan	13	1.30	13	8.38	13	17.00	14	6.16	American...	United States Shipping Board	250.5	43.5	22.0	Taltal	New Orleans	Nitrates	3,140	2,510	1,570
National Bridge	13	1.45	13	8.44	13	16.35	13	23.00	American...	United States Shipping Board	324.0	46.2	23.0	Antofagasta	Charleston	Nitrates	4,760	3,959	2,649
Barges Nos. 26 and 28	10	16.50	13	7.00	13	23.14			American...	Panama Railroad Steamship Line				Balboa	Cristobal	Ballast			
Dunclutha	13	19.30	14	7.54	14	20.30			British	Glen & Co	360.0	49.2	23.4	Mejillones	Liverpool	Nitrates	5,958	4,310	3,213
Maryland	14	7.00	14	8.30	14	18.24			French	French Line	410.5	54.0	23.3	Talcahuano	Havre	(*k*)	5,978	6,234	4,639
Sapulpa	14	9.00	14	10.10	14	18.45	15	12.35	American...	United States Shipping Board	425.8	57.0	21.0	San Francisco.	Palo Blanco	Ballast			
Subchaser No. 284			14	14.00	14				American...	United States Navy				Balboa	Cristobal				

(*h*) Collier. (*i*) For orders. (*j*) Copper, nitrates, and general. (*k*) Saltpeter, copper, wool, and hides.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
Aug. 8	Crijnssen	Royal Netherlands W. I. Mail	Amsterdam.	Aug. 8	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Aug. 9	Pastores	United Fruit Co	Port Limon.	Aug. 8	Pastores	United Fruit Co	New York via Habana.
Aug. 9	Gen. G. W. Goethals.	Panama Railroad Steamship Line	New York via Haiti.	Aug. 9	Crijnssen	Royal Netherlands W. I. Mail	Amsterdam and wayports.
Aug. 9	Ulua	United Fruit Co	New York via Habana.	Aug. 10	Ulua	United Fruit Co	Port Limon.
Aug. 9	Parismina	United Fruit Co	New Orleans.	Aug. 11	Vulcan (*h*)	United States Navy	Norfolk.
Aug. 10	Patrician	T. & J. Harrison	Liverpool and wayports.	Aug. 11	Parismina	United Fruit Co	New Orleans and wayp'ts.
Aug. 11	Vulcan (*h*)	United States Navy	High seas.	Aug. 11	Abangarez	United Fruit Co	New Orleans.

Continued on page 11, column 2.)

Ships at Cristobal Repair Shops.

The following vessels were at the Cristobal shops for repairs during the week ending Monday, August 16:

Steamships *Cristobal*, *Ulysses* and barge *Darien*, miscellaneous repairs and painting to engine, deck, and steward departments; *Nemesis*, renewing 4 plates in shell and bulkheads, changing propeller and repairing rudder; *Walter Hardcastle*, electric welding boilers; *Balboa*, repairing anchor engine; *Loraine*, *Crijnssen*, *Point Lobos*, *Costigan*, *Parismina*, *Cathlamet*, *Santa Paula*, *Henry Steers*, *Eastern Admiral*, *Caribbean*, *Lake Gormania*, *National Bridge*, *Lake Fansdale*, *Donato*, *Dunclutha*, minor repairs.

Additions to Motor-ship Line between Scandinavian Ports and West Coast of United States.

The Norway-Pacific Line (Fred Olsen) contemplates augmenting considerably its motor-ship line between Norwegian and Continental ports and San Francisco via the Canal. A 9,000-ton motor ship for this service has recently been launched in Copenhagen, and other additions are planned. The present service is approximately monthly in each direction, employing the motor ships *Borgland* of 4,894 registered gross tons and *George Washington* of 5,633 tons.

First Jugoslavian Ship through the Canal.

The steamship *Jugoslaven Prvi*, which passed through the Canal on July 12, bound from Newport News to Arica with a cargo of 4,025 tons of coal, is the first vessel flying the flag of Jugoslavia to pass through the Canal. She is reported by her agents as due at Balboa on her return voyage. She is a ship of 3,125 gross and 2,034 net registered tons, 326 feet long by 40 feet beam, and carries a crew of 27.

Visit of Cuban Naval Training Ship.

The *Patria*, a Cuban naval training ship, with a personnel of 84 men arrived at Cristobal, August 11, from Guantanamo Bay, Cuba. The vessel probably will not transit the Canal, calling at Cristobal merely for orders and to allow the crew an opportunity of seeing the Canal. Date of departure and the destination are unknown. Her length is 200 feet; beam 30 feet; draft 11 feet.

Executive Order.

Paragraphs 230, 236, and 237 of the Consular Regulations are hereby amended to read as follows:

230. Payment of Wages at Ports. Every seaman on a vessel of the United States shall be entitled to receive on demand from the master of the vessel to which he belongs one-half part of the balance of his wages earned and remaining unpaid at the time when such demand is made at every port where such vessel, after the voyage has been commenced, shall load or deliver cargo before the voyage is ended, and all stipulations in the contract to the contrary shall be void: Provided, Such a demand shall not be made before the expiration of, nor oftener than once in, five days nor more than once in the same harbor on the same entry. Any failure on the part of the master to comply with this demand shall release the seaman from his contract and he shall be entitled to full payment of wages earned. And when the voyage is ended every such seaman shall be entitled to the remainder of the wages which shall be then due him, as provided in section 4529 of the Revised Statutes. R. S., sec. 4530, as amended by section 31 of the Act of June 5, 1920.

236. No Advance Wages. It shall be, and is hereby, made unlawful in any case to pay any seaman wages in advance of the time when he has actually earned the same, or to pay such advance wages, or to make any order, or note, or other evidence of indebtedness therefor to any other person, or to pay any person, for the shipment of seamen when payment is deducted or to be deducted from a seaman's wages. Any person violating any of the foregoing provisions of this section shall be deemed

guilty of a misdemeanor, and upon conviction shall be punished by a fine of not less than $25 nor more than $100 and may also be imprisoned for a period of not exceeding six months, at the discretion of the court. The payment of such advance wages or allotment, whether made within or without the United States or territories subject to the jurisdiction thereof, shall in no case excep as herein provided absolve the vessel or the master or the owner thereof from the full payment of wages after the same shall have been actually earned, and shall be no defense to a libel suit or action for the recovery of such wages. If any person shall demand or receive, either directly, or indirectly, from any seaman or other person seeking employment, as seaman, or from any person on his behalf, any remuneration whatever for providing him with employment, he shall for every such offense be deemed guilty of a misdemeanor and shall be imprisoned not more than six months or fined not more than $500. Section 32 of the Act approved June 5, 1920.

237. ADVANCE TO SEAMEN SHIPPED IN FOREIGN PORTS. The provision of the statute prohibiting the payment of advance wages to seamen is intended to apply to seamen shipped in foreign ports as well as to seamen shipped in ports of the United States. Section 32 of the Act approved June 5, 1920.

THE WHITE HOUSE,
July 21, 1920.

WOODROW WILSON

[No. 3313.]

September Weather Probabilities.

The following weather conditions may be expected at the Canal entrances during the month of September, 1920. Predictions are based on the records at Colon and Balboa Heights for the past 13 and 14 years, respectively:

Winds—Light southeast and variable winds will prevail over the Atlantic Coast, with an average hourly velocity of about 7 miles, although a maximum velocity as high as 35 miles an hour may occur during the passage of local rain or thunder showers. Light northwest or north winds will prevail over the interior and the Pacific Coast, with an average hourly velocity of about 6 miles. A maximum velocity of 30 or 35 miles an hour may be expected during local rain or thunder storms, but such storms seldom last for more than a few minutes.

Ra n—The average September rainfall on the Atlantic Coast for a period of 49 years is 12.65 inches, while the average rainfall at the Pacific side entrance for a period of 23 years is 7.89 inches. Heavy showers may be expected on both coasts. The average number of days during the month on which the rainfall equals or exceeds 1 inch has been 4 on the Atlantic Coast and 3 on the Pacific side.

Fogs—Few, if any, fogs are likely to occur on either coast, but night and early morning fogs will be numerous over the interior. The average number of fogs over the Gaillard Cut section of the Canal during the month of September, is about 25, of which 57 per cent have been dense. (In a dense fog objects can not be distinguished at a distance of 1,000 feet.) All fogs that occur may be expected to lift or be dissipated by 8.30 a. m.

Temperature—The average shade air temperature over both coasts will be approximately 80° Fahrenheit. The maximum temperature for the month is not likely to exceed 94° F. at the Pacific entrance, or the minimum be lower than 68° F., while at the Atlantic entrance a temperature higher than 91° F. or lower than 71° F. is not likely to occur. The mean daily range in temperature will be about 13° F. on the Pacific Coast and 10° F. on the Atlantic.

Barometric pressure—Except for the well-marked diurnal changes, variations in atmospheric pressure on the Isthmus are very slight, and have little value in indicating future weather conditions. The mean atmospheric pressure for the month will be about 29.84 inches over both coasts. The highest pressure is not likely to be above 29.95 inches, or the minimum lower than 29.70 inches.

Relative humidity—The percentage of moisture in the air varies but slightly from month to month during the rainy season. The average humidity for the month of September on both coasts will be close to 87 per cent. On the Pacific Coast the average maximum nighttime humidity will be about 95 per cent while the average minimum daytime value will be close to 74 per cent. On the Atlantic Coast the values will be about 92 per cent and 79 per cent, respectively.

Storms—Local wind, thunder, or rain squalls of limited extent may be expected quite frequently over the Isthmus during the month of September. No severe general storms are likely to occur as the Canal Zone lies without the regions of violent and

widespread atmospheric disturbance. The West Indian hurricane season is from June to November, but the normal paths of these storms during the coming month lie well to the northward of the Isthmus. A rough sea with fresh winds may be experienced occasionally outside the breakwaters at the Atlantic entrance to the Canal, following the passage of these storms. The average number of days during September on which thunderstorms occur is 18 on both coasts.

Generally cloudy weather will prevail and smooth to moderate seas may be expected at the Pacific entrance.

Tides—Tidal fluctuations at the Atlantic entrance to the Canal are too small to affect navigation, as the maximum tidal range of record is only about 2 feet.

Panama (Balboa) tide predictions for September are given below:

Day of—		Time and Height of High and Low Water.				Day of—		Time and Height of High and Low Water.				Day of—		Time and Height of High and Low Water.			
W.	Mo.					W.	Mo.					W.	Mo.				
W	1	5:25	11:38	**5:42**	**11:55**	S	11	2:27	8:44	**2:49**	**9:06**	Tu	21	3:43	9:37	**4:21**	**10:31**
		16.4	0.5	**15.9**	**0.6**			15.7	1.2	**16.1**	**0.5**			5.2	12.0	**5.1**	**11.6**
Th	2	6:00	**12:13**	**6:19**	.....	S	12	3:16	9:33	**3:37**	**9:51**	W	22	4:52	11:04	**5:30**	**11:56**
		16.4	**0.6**	**15.8**	.....			16.6	0.2	**16.8**	**-0.2**			5.7	11.6	5.3	**11.7**
F	3	0:30	6:39	**12:54**	**6:58**	M	13	4:02	10:15	**4:22**	**10:33**	Th	23	6:05	**12.26**	**6.39**	.....
		0.9	16.3	**1.0**	**15.4**			17.1	-0.5	**17.2**	**-0.5**			5.6	**11.9**	**5.0**	.....
S	4	1:11	7:19	**1:37**	**7:41**	Tu	14	4:45	10:56	**5:05**	**11:12**	F	24	0:59	7:09	**1.24**	**7.37**
		1.5	15.8	**1.7**	**14.9**			17.3	-0.7	**17.1**	**-0.4**			12.4	4.9	**12.6**	**4.9**
S	5	1:59	8:04	**2:31**	**8:31**	W	15	5:26	11:35	**5:48**	**11:50**	S	25	1:49	8:02	**2:08**	**8:25**
		2.3	15.1	**2.4**	**14.1**			17.2	-0.4	**16.8**	**0.1**			13.3	4.0	**13.4**	**3.3**
M	6	2:58	8:58	**3:35**	**9:35**	Th	16	6:05	**12:13**	**6:27**	.....	S	26	2:28	8:47	**2:48**	**9:06**
		3.1	14.3	**3.1**	**13.4**			16.7	**0.2**	**16.1**	.....			14.2	2.8	**14.3**	**2.3**
Tu	7	4:08	10:13	**4:46**	**11:01**	F	17	0:28	6:43	**12:52**	**7:06**	M	27	3:05	9:25	**3:26**	**9:44**
		3.7	13.7	**3.4**	**13.2**			1.0	16.0	**1.2**	**15.2**			15.2	1.7	**15.2**	**1.4**
W	8	5:23	11:39	**6:02**	.....	S	18	1:07	7:20	**1:34**	**7:44**	Tu	28	3:41	10:02	**4:03**	**10:20**
		3.8	13.7	**3.2**	.....			2.1	15.0	**2.3**	**14.2**			15.9	0.7	**15.8**	**0.7**
Th	9	0:24	6:39	**12:54**	**7:13**	S	19	1:51	7:58	**2:22**	**8:26**	W	29	4:18	10:38	**4:41**	**10:58**
		13.7	3.3	**14.3**	**2.5**			3.3	14.0	**3.4**	**13.1**			16.5	0.1	**16.2**	**0.3**
F	10	1:32	7:47	**1:56**	**8:14**	M	20	2:42	8:39	**3:16**	**9:17**	Th	30	4:56	11:16	**5:20**	**11:33**
		14.7	2.4	**15.3**	**1.5**			4.4	12.9	**4.4**	**12.2**			16.9	-0.3	**16.4**	**0.2**

The tides are placed in the order of their occurrence; the *times* of high and low tides are shown on the upper lines. The figures in boldfaced type are hours and elevations between noon and midnight; *ante meridian* figures are given in the ordinary lightfaced type. The time is Cosmopolitan Standard for the meridian 75° W.

The *elevations* of the water are shown on the second line for each day; a comparison of consecutive heights will indicate whether it is high or low water. Heights are reckoned from mean low water springs, which is 8.3 below mean sea level and is the datum of soundings on the Coast and Geodetic Survey charts for this region. The depth of water may accordingly be estimated by adding the tabular height of the tide to the soundings, unless a minus (–) sign is before the height, in which case it is to be subtracted. The annual inequality or variation in the mean sea level is included in the predictions.

Tourist Committee.

The Governor appointed a Tourist Committee, under date of April 15, 1920, to look after the encouragement of travel to the Isthmus and the comfort and satisfaction of visitors. The committee consists of the Master of Transportation of the Panama Railroad, chairman; the manager and the assistant manager of the Tivoli Hotel; the manager of the Washington Hotel; and the editor.

They have initiated correspondence with the various travel bureaus in the United States, and are also engaged in improving arrangements on the Isthmus for making the stay of visitors attractive. The cooperation of the Government of Panama, the chambers of commerce of Panama and Colon, and of the local representatives of steamship lines has been invited.

Binders for Current File of The Panama Canal Record.

This issue of THE PANAMA CANAL RECORD is No. 1 of Volume XIV. Cardboard covers, punched and fitted with brass fasteners, forming handy binders for those who wish to keep a file of the current volume, are offered for sale for 25 cents. Orders may be addressed to THE PANAMA CANAL RECORD, Balboa Heights, Canal Zone.

Offices of The Panama Canal and the Panama Railroad may secure binders on application to the Executive Office.

Dental Treatment for Children.

In consequence of the physical examinations of school children made at the beginning of the school year, numbers of children are sent to the dentist by the examining physicians. In previous years this has resulted in a congestion of work, made especially difficult by the fact that the children usually go to the dentist in the afternoon hours which are the ones most convenient for employees. To obviate this as much as possible and give the children the advantage of treatment in the morning hours, the Chief Health Officer suggests that parents take their children to the district physician for oral examination during the time yet remaining of the vacation period, so that their dental work may be completed under the best conditions before the opening of school.

Boy Scouts to Visit Costa Rica.

Arrangements have been made for a trip of between 40 and 50 Boy Scouts and other Canal Zone boys, accompanied by 4 men of the Bureau of Clubs and Playgrounds, to Costa Rica. The party is to leave Cristobal on September 8 and return there on September 29. The United Fruit Company has granted a special rate of $10 for the round trip, deck passage, between Cristobal and Port Limon, and in cooperation with the Government of Costa Rica will furnish free transportation in Costa Rica. Through the consul for Costa Rica in Colon the Government and press of Costa Rica have assured the party a cordial reception.

Hay Fever Excursion.

The steamship *Panama* of the Panama Railroad Steamship Line is due to sail from New York for Cristobal, via Haiti, on August 19, with a party of sufferers from hay fever, for whom an ocean voyage is considered highly beneficial. The vessel will be at Cristobal about 6 days.

After the departure of the *Panama* from New York the passenger agent there will cable the number of berths taken by the hay fever sufferers, from which the office on the Isthmus will know how many additional passengers may be assigned for the return voyage. Hay fever is not contagious.

Sale of Budded Nursery Stock of Citrus Fruit Trees.

The citrus grove at Juan Mina has for disposition 1,000 to 1,500 budded nursery stock trees of the following fruits:

Oranges: Pineapple, len gin gong, Mediterranean sweets, valencias, washing navel; Villafranca lemons, Satsuma limes.

The above are offered for sale subject to purchaser's inspection and selection at Juan Mina at $1.50 per tree, f. o. b. Gamboa. All trees will be properly labeled for shipment. Interested parties should apply to Superintendent, Cattle Industry, Cristobal, C. Z.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights (telephone 286):

Assistant in poultry and egg handling (male and female); $1,200 to $1,620 a year; No. 435-amended; form 1312; age, 25 years and over; August 24, 1920; entrance salary changed from $1,620–$2,400 to $1,200–$1,620 a year.

Assistant specialist in food investigations (male and female); $1,800 to $2,220; No. 467; form 1312; September 22, 1920; within reasonable age limits.

Traveling auditor; resident auditor (male and female); $2,500 to $3,000 a year (Grade 2); $3,000 to $4,500 a year (Grade 3); No. 177-amended; form 1312; October 1, 1920; amended as to qualifications; age, 25 years but not 55 years.*

Captain, fire department; lieutenant, fire department (male and female); $1,800 to $2,000 a year (captain); $1,500 to $1,800 a year (lieutenant); No. 459; form 1800; September 14, 1920; age, 20 years but not 55 years.*

Draftsman, architectural and structural steel (male and female); $1,560 to $1,800 a year; No. 460; form 1312; September 14, 1920; age, 18 years but not 45 years.*

Engineering draftsman; topographic draftsman (male and female); $1,200 to $3,000 (engineering); $1,200 to $3,000 (topographic) per year; No. 466; form 1312; September 21, 1920; age, 22 years and over.*

Instrument maker (male and female); $1,200 a year to $1,260–$1,440 a year; No. 464; form 1312; September 21, 1920; age, 21 years and over.*

Junior drainage engineer (male and female); $1,200 to $1,920 a year; No. 463; form 1312; September 22, 1920; age, 30 years and over.

Paleontologist (male and female); $1,800 to $2,400 a year; No. 458; form 2118; September 14, 1920; age, 20 years and over.*

Preparator, Division of History, $1,020 a year; preparator, Division of Textiles, $80 a month; preparator, Anthropological Laboratory, $75 a month (male and female); form 304; September 22, 1920; age, 18 years and over.*

Mining draftsman (male and female); $1,200 a year; No. 325; September 8, 1920; form 1312; age, 20 years and over.

Assistant plant pathologist in sugar plant investigations (male and female); $2,040 to $2,280; September 7, 1920; age, 21 years but not 45 years.*

*Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that date.

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Edward (*alias* William) Worrell	37024	Barbados	Panama	Mechanical Division	July 22, 1920.
John Bartley	27174	Jamaica	Colon	Panama Railroad	August 4, 1920.

Official Circulars.

Acting General Manager, Commissary Division.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 13, 1920.

To all concerned—Mr. A. W. Goulet is appointed acting general manager of the Commissary Division during the absence of Mr. J. J. Jackson, general manager, effective August 13, 1920.

R. K. MORRIS,
Chief Quartermaster

Approved:
CHESTER HARDING, *Governor.*

Acting Station Agent, Panama City.

PANAMA RAILROAD COMPANY,
OFFICE OF THE SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., August 3, 1920.

To all concerned—Effective July 29, Mr. W. F. Ilgen, agent and operator, is appointed acting station agent at Panama.

S. W. HEALD, *Superintendent*

Steamship Transportation from the Isthmus.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 11, 1920.

To all concerned—Owing to the congestion in steamship passenger traffic, transportation for employees and the immediate members of their families, is being issued in accordance with date of receipt of application by this office, except when preference is merited because of reduction of force or other emergency.

Visiting relatives can not be granted transportation to the States until employees and their immediate families have been provided for.

Applications received by this office will be held until accomodations are available, when authority for the transportation will be issued, usually a week or 10 days prior to the sailing of the steamer.

The following tentative schedule of sailings of the Panama Railroad Steamship Line steamers from Cristobal after departure of the steamship *Cristobal* on or about August 20 is announced:

Steamship *Gen. Geo. W. Goethals*.....August 23
Steamship *Allianca*.....August 27
Steamship *Colon*.....September 5

C. A. MCILVAINE, *Executive Secretary*

Commercial Traffic in First Six Years—Continued from page 2.

PERIOD.	ATLANTIC TO PACIFIC.			PACIFIC TO ATLANTIC.			TOTAL.		
	Vessels.	Panama Canal net tonnage.	Tons cargo.	Vessels.	Panama Canal net tonnage.	Tons cargo.	Vessels.	Panama Canal net tonnage.	Tons cargo.
December 31, 1919, to June 30, 1920	651	2,325,372	2,279,628	673	2,352,957	2,958,337	1,324	4,678,329	5,237,965
Fiscal year 1920	1,180	4,168,873	4,092,516	1,298	4,376,780	5,281,983	2,478	8,545,653	9,374,499
Grand total to June 30, 1920	4,752	15,536,776	15,893,907	5,460	17,688,800	23,012,371	10,212	33,225,576	38,906,278
July, 1920	107	361,850	398,317	118	494,948	488,497	225	856,798	886,814
August 1 to August 14, inclusive, 1920	75	246,808	284,554	61	211,084	235,983	136	457,892	520,537
Grand total to August 15, 1920	4,934	16,145,434	16,576,778	5,639	18,394,832	23,736,851	10,573	34,540,266	40,313,629

MOVEMENTS OF OCEAN VESSELS.—Continued from page 5.

PORT OF CRISTOBAL—Continued.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
Aug. 11	Abangarez	United Fruit Co.	New Orleans and wayp'ts.	Aug. 12	Patrician	T. & J. Harrison	Galveston.
Aug. 11	Patria (*l*)	Cuban Government	Guantanamo.	Aug. 12	Gen. G. W. Goethals.	Panama Railroad Steamship Line.	Colombian ports.
Aug. 12	Volga	Pacific Steam Navigation Co.	London.	Aug. 13	Volga	Pacific Steam Navigation Co.	Philadelphia.
Aug. 12	Caribbean	Panama Railroad Cattle Industry.	Cartagena.	Aug. 13	Caldas	Caribbean Steamship Co.	Curaçoa.
Aug. 12	Cristobal	Panama Railroad Steamship Line.	New York.				
Aug. 13	Caldas	Caribbean Steamship Co.	New York.				

(*l*) Training ship. *Other than ships passing through the Canal. Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., August 16, 1920.

The following insufficiently addressed mail matter has been received in the office of the Director of Posts and may be obtained upon request of the addressees. Requests for forwarding may be made by telephone, calling No. 182, Balboa:

Brodtman, Mrs. M. A., Box 648	Peterson, Charles
Faget, Mrs. Francis L.	Rosson, Virginia
Jones, Dr. Geo. D.	Rush, Miss Edna
Landers, Miss E. K.	Russell, Fred
Davison, W. G.	Ryan, Mrs. Wm. Ord
Herbst, Miss Dorothy	Stewart, Miss Irene
Judd, Leon	Tweedlie, Robert, Box 124
Lathrop, Deana H.	Zarillo, Antonio
Muncy, Miss G.	

Sale of Two Buildings.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., until 10.30 a. m., August 20, 1920, and then opened, for the purchase of two 1-story frame buildings, located on the former San Jose estate on the Canal Zone, reached via the Tumbo Muerto Road. Form of proposal may be had upon application to the office of the Chief Quartermaster. The Panama Canal reserves the right to reject any or all bids.

Additions to Commissary Stock.

Dry Goods Section.	
Brushes, tooth, ea.	$0.37
Caps, bathing, ea.	.42
Chemises, envelope, ea.	3.70
Chemises, envelope, ea.	5.20
Chemises, envelope, ea.	6.30
Chemises, envelope, ea.	5.95
Corsets, coutil, white, medium bust, short hip, ea.	3.05
Dress goods:	
Voile, Jassamine, yd.	.49
Voile, Deauville, yd.	.46
Lotion, sunburn, P. C., 4-oz. bot.	.15
Two cents allowed for return of empty bottle.	
Mirrors, with frames, black metal, ea.	.23
Shampoo, oil coconut, mulsified, bot.	.46
Ties, 4-in-hand, fancy silk, open ends, ea.	.84
Grocery Section.	
Chocolate, raisin, bar	.09
Dressing, salad, Thousand Island, 10-oz. bot	.28
Preserves, pineapple, P. C., 10-oz. bot.	.25
Two cents allowed for return of empty bottle.	
Sugar, granulated, States', 5-lb. bag	1.25
Hardware Section.	
Fishing tackle:	
Sinkers, ringed, No. 803, 3/0, ea.	.38
Sinkers, ringed, No. 803, 1/0, ea.	.18
Wobblers, Magic, No. 3234, 1, ea.	.23

COMMISSARY NOTES.

Electric Appliances.

Information has been received from the commissary purchasing agent in New York, that manufacturers are so far behind on orders for electric appliances that it is impossible for them to say just when shipments will be made to the Isthmus.

Laundry Charge Accounts.

Commissary patrons who are taking advantage of laundry charge accounts are informed that the time limit in which payment may be made without penalty has been changed from the 25th to the 20th of the month following that in which the work is done.

Hair Dressing.

A new article of hair dressing known as "Antiseptic Scalp Lotion" is now being manufactured in the industrial laboratory, its use being for the relief of an itching scalp or for the treatment of dandruff. While it is not an oily preparation, it will give the hair an excellent gloss. To obtain best results brush the head briskly with a stiff hairbrush, apply lotion and rub scalp freely but gently. This lotion sells for 25 cents the bottle.

Books.

Books received:

A novel of manners: "Many Junes," by Archibald Marshall. A book of the sea: "The Rescue," by Joseph Conrad. Other books for Conrad fans, fast selling, are: "Almayer's Folly," "Youth," "Romance," "Arrow of Gold," "Chance," "The Inheritors." Of baseball: "Commy" (The Story of Chas. A. Comiskey, by Axelson). Of youth and its amusing follies: "Seventeen," by Booth Tarkington. Of the garment trade: "We Need the Business," by Joseph C. Austrian, a second "Potash and Perlmutter." Rattling detective stories: "Clique of Gold," "File No. 113," "Mystery of the Yellow Room," "Monsieur Lecoq." Most readable essays: "Walking Stick Papers," by Robert Cortes Holliday; "Chimney Pot Papers," by Brooks. Of big business: "Wolves," by Alden W. Welch. Of the American war-time secret service: "The Web," by Emerson Hough. Of many laughs: "Local Color," by Irvin S. Cobb; "Little Journeys Toward Paris," by Simeon Strunsky; "The Young Visiters," by Daisy Ashford; "Going Some," by Rex Beach. Of the late war: "In the Fourth Year," by H. G. Wells; "Out to Win," by Coningsby Dawson; "Shock at the Front," by Doctor Porter; "All in it," by Lieut. Ian Hay Beith; "High Adventure," by Capt. James Norman Hall; "Headquarters Nights," by Vernon Kellog. Drama: "The Admirable Crichton" (called in the Cecil de Mille photoplay production "Male and Female"), by James M. Barrie. Children's gift books: "King Arthur and His Knights," "Otto of the Silver Hand," "Sir Launcelot and His Companions." Biography: "The Career of Leonard Wood," "Moments with Mark Twain." Religion: "On the Manuscript of God." Poetry: "Panama and Other Poems;" "Poems of Francis Ledwidge;" "McAroni Ballads," by T. A. Daly; "Door of Dreams," by Jessie B. Rittenhouse; "Irish Poetry;" "Mountain Interval," by Robert Frost. A novel of the unusual: "Peter Middleton," by Henry K. Marks. Technical: "How to run an Automobile," by Victor W. Page. Travel: "In Seven Lands," by Alfred Vizetelly. Historical: "Ireland in the Last Fifty Years," by Ernest Baker; "Ireland's Fight for Freedom," by George Creel. Art: Joseph Pennell's "Pictures of the Wonder of Work;" Art of Rodin (Modern Library); Art of Aubrey Beardsley (Modern Library). Adventure: "Standard Bearers," by Katherine Mayo (absorbing tales of the Pennsylvania State Police).

THE PANAMA CANAL RECORD

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Return of Midshipmen's Practice Squadron.

The battleships *Connecticut*, *Kansas*, *Michigan*, *Minnesota*, *New Hampshire*, and *South Carolina*, and the supply ship *Culgoa*, arrived at Balboa on August 21 from San Pedro, on their way to Annapolis, returning from the midsummer practice cruise of the midshipmen of the United States Naval Academy. The vessels spent 2 days in Canal waters and shore liberty was granted the men. The squadron had passed through the Canal in the middle of June, bound for Honolulu.

The Fuel Situation.

THE PANAMA CANAL, MARINE DIVISION,
BALBOA HEIGHTS, C. Z., August 20, 1920.

To all steamship agents—The following information regarding the fuel situation has accumulated since the issuance of my circular of August 9:

August 4, 1920—Letter from American Consulate, Kingston, Jamaica, advises no changes since their message of July 15 (my circular of July 19); also that there is no fuel oil there, except small quantity kept by British Admiralty.

August 9, 1920—Panama Canal, Washington, advises it has advice that tanker for Shipping Board was delayed and sailed from New Orleans for St. Thomas August 6th, and that next best fueling station in West Indies is Port of Spain, Trinidad, where oil is available for all vessels; that there is plenty of oil at Honolulu for Shipping Board vessels; that, while there is no change in situation on west coast of South America, Shipping Board is trying to make arrangements at Iquique.

August 10, 1920—American Consul, Habana, advises fuel oil situation unchanged since report July 23d; that no boat has yet been refused low grade oil to make next port of call; that there are only 100 tons of bunker coal available, but that shipment of 3,000 tons expected to arrive 13th or 14th.

August 12, 1920—Panama Canal, Washington, advises that, after further delay, Shipping Board tanker with oil for St. Thomas 10th or early 11th; that, meantime, Shipping Board has no oil at St. Thomas.

August 14, 1920—Governor, Porto Rico, advises, in reply to inquiry, that no restrictions have been established at San Juan on sale of bunker coal to ships.

August 18, 1920—Shipping Board advises tanker sailed from New Orleans 13th for St. Thomas; 70,000 barrels of oil on hand at Honolulu 17th; no change in situation on west coast of South America, negotiations with Grace & Company still pending; no oil at Azores; 35,000 barrels on hand at Bizerta, September 15th.

Referring to my circular of August 13 advising that, until further orders, rules recently established for bunkering vessels will not extend to sale of Diesel oil, as the quantity on hand on the Isthmus would appear to be adequate for fulfilling all requirements.

This does not mean that we will oil in an unlimited fashion vessels propelled by Diesel engines. Such vessels will be bunkered to their next regular port of call where Diesel oil is available. We, of course, can not permit vessels to take more Diesel oil here than is needed for the immediate voyage merely because of the advantageous price at which we sell it, as maintenance of supply would then be too difficult.

E. P. JESSOP,
Marine Superintendent.

Service to Puntarenas, Costa Rica.

A regular service between the Canal ports and Puntarenas, Costa Rica, has been established with the Costa Rican motor ship *Rosana* of 278 gross and 207 net tons, Panama Canal measurement. Sailings are approximately every 15 days in each direction. Accommodations are available for 6 first-class passengers. The *Rosana* is 112 feet long by 25 feet beam, is fitted with two 75-horsepower Diesel engines and makes approximately 9 knots. Puntarenas is 471 miles from Balboa.

The management of the *Rosana* is in the hands of the Empresa de Navegación Centro Americana, with headquarters in Puntarenas.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight August 21, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship	Arrived at port		Entered Canal		Completed transit		Cleared for sea		Nationality	Line	Length	Beam	Salt water draft	From—	For—	Cargo	Tons	Panama Canal tonnage	
	Day	Hour	Day	Hour	Day	Hour	Day	Hour										Gross	Net
Henry Steer	11	19.30	15	6.22	15	13.31	16	14.30	American	Barber Line (S. B.)	409.0	54.2	26.1	Philadelphia	Yokohama	General	7,558	6,528	4,724
Lake Gormania	13	16.15	15	6 30	15	15.33	19	14.00	American	American Metal Transp (S. B.)	255.0	43.6	21.3	Norfolk	Antofagasta	Coal	2,740	2,539	1,657
Eastern Admiral	13	12.30	15	7.25	15	15.28	15	16.25	American	Barber Line (S. B.)	414.7	55.7	24.6	New York	Comax	General	8,951	7,257	5,269
Pilar de Larrinaga	15	1.40	15	8.15	15	16 30	15	17.54	British	Larrinaga Steamship Co	415.0	58.0	19.0	New Castle-on-Tyne.	Portland	Ballast		7,627	5,547
Eagle	15	6.50	15	8.33	15	16.48	15	17.51	American	Standard Transportation Co	410.0	56.0	27.0	New York	Manila	Case oil and paint	7,800	8,243	6,266
Hwah Chic	15	7.30	15	10 10	15	17.44	16	8.32	Japanese	Japanese Government	270.0	38.0	18.4	Port Arthur	Hongkong	Case oil and steel	2,600	2,198	1,501
Grelwen	14	12.17	15	11 40	15	19.00	16	22.06	British	J. C. Gould	389.0	52.5	24.6	Port Arthur	Adelaide	Oils	7,000	5,973	4,526
Rose Mahoney *a*	14	10.00	15	15.13	16	17.52	18	13.54	American	A. F. Mahoney & Co	260.0	48.3	19.0	Buenos Aires	San Francisco	Bones	2,300	2,116	1,960
Balboa	12	17.47	16	6.00	16	13.11	17	20.08	American	Colombian Maritime Co	190.0	29.1	13.2	Cristobal	Buenaventura	General	515	741	350
Huasco	12	15.25	16	8.08	16	14.45	16	21.42	Chilean	South American Steamship Line	379.7	44.3	22.6	Cristobal	Valparaiso	General	795	4,552	3,182
Zahma (*b*)	16	5.55	16	10.20	16	17.42	18	12.35	American	A. M. Andrews	80.0	21.0	8.0	New York	Los Angeles	Ballast		75	58
Touraine (*a*)	15	10.00	16	10.57	17	16.07	17	16.50	French	Soc. Gen. de Armement	263.0	39.0	14.0	St. Nazaire	San Francisco	Ballast		2,042	1,806
Alicia (*c*)	12	14.10	17	6.24	17	13.14			American	Pacific Metals Corporation	44.4	13.0		Cristobal	Balboa	Ballast		22	12
Progresso (*d*)	17	7.05	17	15.25	18	11.43			Mexican	Mexican Government	230.0	38.0	11.0	Progreso	Manzanillo	Ballast		1,399	639
Santa Ana	17	16.45	18	6.17	18	12.40	18	15.08	American	W. R. Grace & Co	360.2	51.6	22.6	New York	Valparaiso	General	1,904	5,842	4,150
Benjamin Brewster	17	14.14	18	6.17	18	14.19	18	19.05	American	Standard Oil Co	411.6	53.4	27.0	Tampico	Pisagua	Crude oil	(*g*)	6,360	4,337
Woonsocket	17	11.57	18	7.05	18	14.22	18	15.25	American	Green Star Line	400.2	54.2	27.0	Baltimore	Singapore	General	7,500	6,928	5,050
Lake Fansdale	16	17.45	19	6.20	19	14.52	19	15.55	American	Callahan Atkinson Co. (S. B.)	251.0	43.6	25.6	Norfolk	Iquique	Briquette coal	2,933	2,856	1,806
R-22 (*e*)			19	7.15	19	15.30			American	United States Navy				Coco Solo	Balboa				
Canca	15	18.20	20	6.10	20	14.48	20	19.02	British	Pacific Steam Navigation Co	346.2	35.0	16.6	Cristobal	Guayaquil	General	1,030	1,582	1,023
Tecumseh	19	13.44	20	6.28	20	14.05	20	15.03	British	Standard Transportation Co	440.0	53.7	27.6	Beaumont	Shanghai	Oil	8,525	8,233	5,272
Fortol	20	7.37	20	8.54	20	15.43	21	22.50	British	British Admiralty	331.0	41.4	21.0	Portsmouth	Acapulco	Fuel oil	2,123	2,780	1,108
Calera	18	10.18	20	9.12	20	18.46			Chilean	Indies Navigation Co	260.6	35.4	11.6	New York	Valparaiso	Steel and gasoline		1,738	1,023
Steel Worker	19	22.18	20	10.50	20	18.09	26	15.30	American	Isthmian Steamship Line	424.2	56.2	26.0	New York	Vancouver	General	8,500	7,539	5,495
Orbita	19	13.45	20	11.30	20	19.42	20	20.50	British	Pacific Steam Navigation Co	550.0	67.0	26.0	Liverpool	Valparaiso	General	3,100	16,822	11,508
Eagle No. 4	7-15	12.45	20	6.40	20	12.34	20	14.59	American	United States Navy				Coco Solo	Balboa				
Mont Cenis	20	7.05	21	6.27	21	13.36	21	15.10	French	Cia. Gen'l Transport Maritime	363.0	48.0		Marseilles	San Francisco	General	410	4,662	3,512
Daybreak	21	7.05	21	8.05	21	15.23	21	21.52	British	Claymen Steamship Co	331.3	46.0	25.0	Tampico	Antofagasta	Kerosene, etc	3,300	3,688	2,438
Sylvan Arrow	21	9.02	21	10.00	21	18.05	21	19.40	American	Standard Transportation Co	457.6	62.7	27.0	Beaumont	Taku-Bar	Petroleum	10,400	9,931	7,095
S. C. 285			21	6.50	21	12.03			American	United States Navy				Coco Solo	Balboa				
Chance Divine *f*	20	6.00	21	6.00	21				Panaman	Daniel Rotti				Cristobal	Panama	Ballast		1	1

(*a*) Bark. (*b*) Yacht. (*c*) Launch. (*d*) Transport. (*e*) Submarine. (*f*) Cayuco. (*g*) 52,000 barrels.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Laurel Branch..	14	22.30	15	7.50	15	16.45	15	19.05	British.....	Nautilus Steam Shipping Co....	360.2	46.0	23.3	Antofagasta...	Wilmington...	Nitrates.....	5,550	4,182	3,030
Donato.....	14	23.10	15	8.04	15	18.00	....	.....	Spanish.....	Commercial Co.....	345.0	47.9	24.0	Caleta Buena.	Hampton R'ds	Nitrates.....	6,032	4,321	3,166
Cauca.....	15	9.12	15	11.32	15	18.20	20	6.10	British.....	Pacific Steam Navigation Co....	246.0	35.2	16.0	Guayaquil....	Cristobal.....	General.....	1,040	1,582	1,023
Lake Fibre.....	15	13.13	16	6.43	16	14.27	16	16.35	American...	Gilmartin & Co. (S. B.).....	248.6	43.7	24.0	Iquique.....	Savannah.....	Nitrates.....	3,600	2,823	1,740
Cote Blanche....	15	19.00	16	8.04	16	16.15	21	6.05	American...	Wessel Duval & Co. (S. B.).....	253.4	43.7	22.4	Iquique.....	Boston.....	Nitrate of soda..	3,500	2,653	1,680
Schodack.....	17	2.00	17	7.45	17	15.45	17	22.00	American...	Barber Line (S. B.).....	390.0	52.4	23.0	Manila.....	Habana.....	General, rice, etc.	6,135	6,106	4,401
Robin Hood....	17	2.00	17	8.13	17	16.57	17	20.55	American...	Robin Line.....	424.8	55.2	27.8	Mejillones....	Pensacola.....	Nitrates.....	9,028	7,473	5,622
Santa Luisa....	17	22.00	18	7.21	18	13.55	18	15.22	American...	W. R. Grace & Co.....	360.2	51.6	23.3	Valparaiso....	New York....	Nitrates, general.	4,014	5,694	3,975
Coushatta.....	18	5.20	18	8.48	18	17.20	18	22.00	American...	Hasler Brothers (S. B.).....	253.4	43.7	22.6	Iquique.....	Savannah.....	Nitrates.....	3,711	5,694	2,975
South Bend (*h*).	18	13.20	19	7.05	19	14.58	21	8.08	American...	United States Army.....	448.9	60.2	27.6	Astoria.....	New York....	Flour, general...	8,003	.....	.....
Yomei Maru...	18	19.00	19	7.56	19	16.05	19	19.05	Japanese...	Taiyo Kisen Kaisha.....	415.0	55.5	24.0	Kobe.....	Petrograd	Sugar, general...	4,900	.....	.....
Argyllshire.....	19	5.30	19	9.28	19	18.20	19	22.58	British.....	Turnbull Martin & Co.....	526.2	61.4	26.6	Sydney.....	London.....	Frozen, general..	8,090	12,421	8,862
Otho.....	18	22.45	19	13.16	19	20.15	20	12.12	American...	Frank Waterhouse & Co. (S. B.).	380.5	51.3	23.0	Seattle.....	New York....	Flour.....	6,811	5,659	4,034
Crisfield.....	19	16.35	20	6.54	20	14.55	20	19.00	American...	Amer. Metals Transp. Co. (S. B.)	402.6	54.8	25.5	Antofagasta...	Philadelphia..	Nitrates.....	8,800	6,932	5,100
Coalinga.....	7	1.30	20	7.06	20	15.30	20	15.55	American...	Union Oil Co.....	471.0	55.0	20.0	Antofagasta...	Tampico.....	Ballast.....	.....	8,108	5,877
Mariccopa.....	20	5.30	20	7.48	20	16.05	20	23.42	Norwegian..	W. Wilhelmsen.....	425.3	57.0	19.0	Tocopilla.....	Tampico.....	Ballast.....	.....	6,996	5,108
Mantaro.....	20	12.13	20	9.41	20	16.57	....	.....	Peruvian...	Peruvian Line.....	360.0	46.0	21.8	Callao.....	Cristobal.....	General.....	2,976	4,838	2,959
Lake Maurepas	20	8.30	20	10.46	20	17.55	20	20.15	American...	Wessel Duval (S. B.).....	253.5	43.5	19.6	Iquique.....	Baltimore.....	Nitrates.....	2,662	2,383	1,517
Oriana.....	20	17.30	21	6.35	21	13.50	21	17.40	British.....	Pacific Steam Navigation Co....	467.5	56.2	21.0	Valparaiso....	Liverpool.....	General.....	1,278	8,620	5,345
Junin.....	20	21.34	21	6.42	21	16.03	22	2.25	British.....	Pacific Steam Navigation Co....	390.0	50.2	20.0	Puntarenas...	Liverpool.....	General.....	3,700	5,930	4,395
Cedar Branch..	20	23.25	21	7.48	21	16.28	21	18.12	British.....	F. & W. Ritson.....	390.5	51.0	22.0	Valparaiso....	United King..	General.....	5,230	4,912	3,642
R-23 (*e*).....	4	15.16	21	7.58	21	14.44	....	....	American...	United States Navy.....	.....	.....	.....	Balboa.....	Cristobal.....	.....	.....	.....	.....
Orion (*i*).....	21	7.30	21	8.28	21	18.20	....	.....	American...	United States Navy.....	514.0	65.0	21.0	San Diego....	Hampton R'ds	Ballast.....	.....	.....	.....
Raranga.....	21	8.20	21	10.03	21	19.12	21	19.12	British.....	Shaw, Savile & Albion Co.....	478.0	63.2	29.0	Wellington....	London.....	General.....	7,458	10,986	7,837
Standard Arrow	21	10.30	21	11.08	21	19.25	21	19.25	American...	Standard Transportation Co....	467.6	62.7	21.0	San Francisco.	Beaumont....	Ballast.....	.....	9,988	7,090

(*h*) U. S. Army transport. (*i*) Collier.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
Aug. 15.....	Ulua.....	United Fruit Co.....	Port Limon.	Aug. 15.....	Caribbean.....	Panama Railroad Cattle Industry.	Cartagena.
Aug. 15.....	Ulysses (*i*).....	Panama Railroad Steamship Line..	Norfolk.	Aug. 15.....	Ulua.....	United Fruit Co.....	New York via Habana.
Aug. 15.....	Darieu (*j*).....	Panama Railroad Steamship Line..	Norfolk.	Aug. 17.....	Toloa.....	United Fruit Co.....	Port Limon.
Aug. 16.....	Cartago.....	United Fruit Co.....	New Orleans.	Aug. 18.....	Zacapa.....	United Fruit Co.....	N. Y. via Jamaica, Cuba.
Aug. 16.....	Toloa.....	United Fruit Co.....	New York via Habana.	Aug. 18.....	Atenas.....	United Fruit Co.....	New Orleans.
Aug. 16.....	Chinampa.....	Standard Oil Co.....	Tampico.	Aug. 18.....	Cartago.....	United Fruit Co.....	N. O. via Bocas, Habana.
Aug. 17.....	Perou.....	French Line.....	St. Nazaire and waypts.	Aug. 19.....	Chinampa.....	Standard Oil Co.....	Tampico.
Aug. 18.....	Atenas.....	United Fruit Co.....	New Orleans via waypts.	Aug. 19.....	Ulysses (*i*).....	Panama Railroad Steamship Line..	Norfolk.
Aug. 18.....	Zacapa.....	United Fruit Co.....	New York, Col., Kingston	Aug. 19.....	Darien (*j*).....	Panama Railroad Steamship Line..	Norfolk.
Aug. 18.....	Carrillo.....	United Fruit Co.....	New York via Kingston.	Aug. 19.....	Carrillo.....	United Fruit Co.....	N. Y., Col., Jam., Cuba.
Aug. 19.....	Columbia.....	N. O. & S. A. S. S. Line.....	New Orleans.	Aug. 19.....	Patria (*k*).....	Cuban Government.....	Cienfuegos, Cuba.
Aug. 19.....	Caribbean.....	Panama Railroad Cattle Industry..	Cartagena.	Aug. 20.....	Cristobal.....	Panama Railroad Steamship Line..	New York.
Aug. 20.....	Colon.....	Panama Railroad Steamship Line..	New York.	Aug. 20.....	Columbia.....	N. O. & S. A. S. S. Line.....	New Orleans.
Aug. 21.....	Nessian.....	Leyland Line.....	Liverpool via wayports.	.....	.....	.....	.....

(*j*) Barge. (*k*) Training ship.

PORT OF BALBOA.

*ARRIVALS.				*DEPARTURES.			
Aug. 21.....	Seiyo Maru.....	Toyo Kisen Kaisha.....	Valparaiso.	None.....	.....	.....	.....

*Other than ships passing through the Canal.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

Visit of the "Kasuga."

The Japanese cruiser *Kasuga* arrived at Cristobal on August 22 from New Orleans and, after passing through the Canal, tied up at dock 16 at Balboa. A reception, with exhibitions of jiu-jitsu, was given on board in the afternoon of August 24. The *Kasuga* is due to sail on August 26 for San Francisco.

Red Cross Ship Carrying Polish and Russian Children.

The Japanese steamship *Yomei Maru*, under charter to the American Red Cross, arrived at Balboa on August 18 on her way from Kobe, via Vladivostok and San Francisco, to New York with 852 Russian and Polish children, 87 Russian prisoners taken by the Japanese in eastern Siberia, 4 physicians, 14 nurses, and 4,900 tons of cargo. The destination of the ship was Petrograd but on account of the political situation in Russia and Poland she was diverted to New York for orders. The children in charge of the Red Cross came into its care after being separated from their families in consequence of the Russian revolution and are being returned home by the trans-Siberian railroad and the ocean route on account of difficulties of transportation in western Russia.

At both Balboa and Cristobal the *Yomei Maru* was met by representatives of the Canal Zone Chapter of the Red Cross, and other residents of the Canal Zone, and the children were given refreshments and entertainment.

Quarantine Circular Regarding the Port of Paita.

BALBOA HEIGHTS, C. Z., August 24, 1920.

Arrangements have been made by which all lighters used for loading vessels bound for the Canal Zone or the United States will be fumigated at the port of Paita before use, and all dry hides in bundles shipped from that port will be similarly fumigated. Vessels carrying freight from Paita and bringing certificates that the above-mentioned fumigation has been performed will not be subject to any additional restrictions.

S. B. GRUBBS,
Chief Quarantine Officer.

Passengers from Paita.

It has been reported that steamship companies have been refusing to receive passengers from Paita for the Canal ports direct, but have been requiring them to embark from Callao, on account of supposed quarantine requirements at the Canal.

The Canal is doing everything possible to reduce to a minimum the delays to ships or passengers arriving at its ports, and has not initiated such a requirement. Passengers from Paita have always been received without detention if they have been away from the port 6 days. If the steamer arrives at Balboa in less than 6 days, passengers from Paita were taken off and were required to remain in the quarantine station at either Balboa or Colon until the 6 days have expired. There has been no other delay to them unless they became sick; furthermore, if in transit they were allowed to embark and leave the Canal Zone before the quarantine time was over. There has been no delay to the vessel on account of taking passengers at Paita.

Since the epidemic of yellow fever and plague that occurred in northern Peru 6 months ago, very thorough work has been done, especially at Paita, so that this port is considered safe and passengers who have not come from interior points are not quarantined at all.

In this connection, there is now no quarantine of persons on account of bubonic plague, all of the measures at the Canal being directed against rats. On this account special rules have been made for freight from Paita. These will be removed promptly after the reconstruction of Paita and the consequent abolition of the port as a plague menace.

Ships at Cristobal Repair Shops.

The following vessels were at the Cristobal shops for repairs during the week ending Monday, August 23:

Steamships *Colon*, *Advance*, *Gen. Geo. W. Goethals*, miscellaneous repairs and painting to engine, deck, and steward departments; *Walter Hardcastle*, patch furnace and boiler front; U. S. Army transport *South Bend*, repair circulator, fire pumps, etc.; *Mantaro*, repair furnace and electric weld boiler; *Springfield*, repair condenser and rebrick boilers: *Donato*, *Chinampa*, *Benjamin Brewster*, *Caribbean*, tug *St. Finbarr*, *Lake Granby*, *Maricopa*, U. S. S. *Morris*, U. S. S. *Tern*, U. S. S. *Orion*, *City of Joliet*, minor repairs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending August 21, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Ulua	United Fruit Co	August 15	August 15	30	7
Caribbean	Panama Railroad Cattle Industry		August 15		12
Balboa	Colombian Maritime Co		August 16		504
Huasco	Chilean Steamship Line		August 16		795
Ulysses	Panama Railroad Steamship Line	August 15	August 19	11,991	(†)
*Darien	Panama Railroad Steamship Line	August 15	August 19	7,276	(†)
Cauca	Pacific Steam Navigation Co	August 15	August 20	1,043	1,030
Toloa	United Fruit Co	August 16	August 17	396	15
Cartago	United Fruit Co	August 16	August 18	675	255
Chinampa	Standard Oil Co	August 16	August 19	8,571	(†)
Perou	French Line	August 17		16	
Atenas	United Fruit Co	August 18	August 18	1	½
Zacapa	United Fruit Co	August 18	August 18	½	6
Carrillo	United Fruit Co	August 18	August 19	½	165
Calera	Indies Navigation Co	August 18	August 20	378	(†)
Orbita	Pacific Steam Navigation Co	August 19	August 20	114	(†)
Columbia	New Orleans & So. Am. S. S. Co	August 19	August 20	22	591
Caribbean	Panama Railroad Cattle Industry	August 19		210	
Mantaro	Peruvian Steamship Co	August 20		2,976	
Colon	Panama Railroad Steamship Line	August 20		2,412	
Cristobal	Panama Railroad Steamship Line		August 20		5,871
Almelo	Royal Dutch W. I. Mail S. S. Co	August 21		424	
Nessian	Leyland Line	August 21		1,445	
Junin	Pacific Steam Navigation Co	August 21		70	

*Barge. † No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending August 21, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Cauca	Pacific Steam Navigation Co	August 15	August 15	11	
Balboa	Colombia Maritime Co	August 16	August 17		74
Seiyo Maru	Toyo Kisen Kaisha	August 21	(*)		
Calera	Indies Navigation Co	August 20	(*)	500	

* In port.

Time of Passenger Connections between New York and Buenos Aires.

The recent voyage of a passenger liner from New York to Buenos Aires direct in 19 days and 15 hours was reported as establishing a new record for the voyage between those ports, southbound.

The ships of the Grace Line, plying between New York and the west coast of South America, make the voyage between New York and

Valparaiso in 18 days. The railway journey between Valparaiso and Buenos Aires takes about a day and a half. The new record for the direct voyage is seen to be slightly above the time which can be made by using the west coast route.

The Pacific Steam Navigation Company makes the voyage between New York and Valparaiso, with the liners *Ebro* and *Essequibo*, in 20 days.

The South American Steamship Company (Chilean Line), operating the steamship *Renaico* between Valparaiso and New York, makes the voyage in 21 days.

The voyage from the Isthmus to Valparaiso, or *vice versa*, can be made in from 12 to 15 days. The time for direct sailing between the Isthmus and New York is 7 days; for direct sailing between Cristobal and New Orleans, 5 days.

Passengers to be Carried on Baltimore-San Francisco Line.

The Pacific Mail Steamship Company has announced its intention of establishing a coastwise passenger service between Baltimore and San Francisco, via wayports, early in 1921, or as soon as 4 of the 535-foot passenger liners allocated to its trans-Pacific service by the United States Shipping Board shall have been delivered. Upon receipt of the new ships the *Colombia*, *Ecuador*, and *Venezuela* will be diverted from the trans-Pacific service to the coastwise line, which is now carrying cargo only and employing the *Point Adams*, *Point Bonita*, *Point Judith*, and *Point Lobos*. The *Cuba* is also to be employed in the coastwise service, carrying passengers; and if ships can be secured to replace the *Santa Cruz* and *Colusa* in the company's Far Eastern service they will be used in the coastwise line, giving 6 passenger carriers and 4 cargo vessels for the Baltimore-San Francisco service.

All of these vessels will stop at the Canal terminals to handle passengers or cargo; schedules as at present outlined have them spending about 2 days at each end of the Canal.

Ports of call will be as at present: Habana, Puerto Colombia, Cristobal, Balboa, Acajutla, San Jose de Guatemala, and Los Angeles.

Addition to Fire-fighting Equipment for Terminals.

A new automobile combination hose and chemical fire engine has been added to the equipment of the fire station at Balboa, allowing the transfer of an older engine to Cristobal.

The equipment at Cristobal consists now of 2 combination pumping and hose wagons, and 1 hose wagon which is to be fitted with a chemical tank. The equipment of the Balboa station includes 1 pumping and hose wagon and the new chemical and hose wagon, which carries 2 extension ladders. The personnel at each of the 2 terminal stations includes 17 men when the force is at full strength.

In addition to the fire force and equipment on land, each terminal has two tugs equipped for fire fighting. These are the *Porto Bello* and the *Tavernilla* at Cristobal, and the *Cocoli* and the *Gorgona* at Balboa.

With all the equipment engaged at once, the fire force at Cristobal could play 15 streams through $1\frac{1}{8}$-inch nozzles under 50 pounds pressure on a ship, delivering 3,900 gallons of water per minute. That at Balboa could play 13 streams through $1\frac{1}{8}$-inch nozzles, under 50

pounds pressure, delivering 3,500 gallons per minute. This is in addition to the work of the chemical engines.

The policy of The Panama Canal of not insuring its buildings and supplies has had a tendency toward the development of unusual care in the prevention of fire, and of extra facilities for combating fires which break out.

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Hugh M. Brown.....	38354	St. Vincent.....	San Miguel.....	Cattle Industry.....	July 27, 1920.
George Hazel.....	20916	Barbados.....	Panama.....	Supply Department....	July 24, 1920.
Peter Gale or Gayle...	26984	Jamaica.....	Colon.....	Panama Railroad.....	August 11, 1920.
Charles Cumberbatch, *alias* Samuel Wickham	42883	Barbados.....	Red Tank.....	Pacific Locks.....	August 18, 1920.

Official Circulars.

Charges for Inspection of Cattle and Other Food Animals.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 16, 1920.

CIRCULAR NO. 700-3:

Paragraph No. 2 of Circular No. 700, dated June 1, 1915, is hereby amended to read as follows:

"2. A charge of ten (10) cents per animal will be made for the quarantine inspection herein required."

CHESTER HARDING,
Governor.

Prohibition of Political Activity.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 16, 1920.

To all concerned—At the request of the United States Civil Service Commission, the following warning against activity in politics by Federal officers and employees is issued:

"Competitive employees, while retaining the right to vote and to express privately their opinion on political subjects, *are forbidden to take an active part in political management or in political campaigns.* This also applies to temporary employees, employees on leave of absence with or without pay, substitutes and laborers. Political activity in city, county, State, or National elections, whether primary or regular, or in behalf of any party or candidate, or any measure to be voted upon, is prohibited.

"Employees are accountable for political activity by persons other than themselves, including wives or husbands, if, in fact, the employees are thus accomplishing by collusion and indirection what they may not lawfully do directly and openly. Political activity, in fact, regardless of the methods or means used by the employee constitutes the violation.

"Further information is contained in Circular 1236, a copy of which may be obtained from the Commission, its District Secretaries, or any local civil-service board.

POLITICAL ASSESSMENTS, SOLICITATIONS, AND DISCRIMINATION.

"Sections 118, 119, 120, and 121 of the Criminal Code (see 35 Stat., 1110) provide that no legislative, executive, or judicial officer or employee shall solicit or be concerned in soliciting or receiving any money or contribution for political purposes from any other officer or employee of the Government; that no solicitation or receipt of political assessments shall be made by any person in any room or building occupied in the discharge of official duties by any officer or employee of the United States; that no officer or employee shall be discharged or demoted for refusing to make any contribution for political purposes; and that no officer or employee of the Government shall directly or indirectly give or hand over to any other officer or employee in the service of the United States or to any member or delegate to Congress any money or other valuable thing for the promotion of any political object whatever.

"Section 122 of the Criminal Code provides that whoever shall violate any provisions of the four preceding sections shall be fined not more than $5,000 or imprisoned not more than three years, or both.

"It is the duty of any person having knowledge of the violation of any of the foregoing provisions of the Civil Service Rules or Criminal Code to submit the facts to the United States Civil Service Commission, Washington, D. C.

MARTIN A. MORRISON,
President, U. S. Civil Service Commission."

Employees of The Panama Canal and the Panama Railroad Company should be governed by the foregoing. Those employees who are not in the competitive classified service should deport themselves in the same manner as is expected of competitive classified employees.

CHESTER HARDING,
Governor, The Panama Canal.
President, Panama Railroad Company.

Acting Electrical Engineer.

THE PANAMA CANAL,
DEPT. OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., August 17, 1920.

To all concerned—Effective August 20, 1920, and during the absence of Mr. W. L. Hersh, on leave, Mr. A. C. Garlington will act as Electrical Engineer.

JAY J. MORROW,
Engineer of Maintenance.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 17, 1920.

CIRCULAR No. 254:

Effective August 20, 1920, Mr. A. C. Garlington, Superintendent, Maintenance and Construction, is designated an accountable official of The Panama Canal, *vice* Mr. W. L. Hersh, and as such will account for all nonexpendable property charged to the Electrical Division and the Division of Telephones and Signals of the Panama Railroad.

ELWYN GREENE,
Acting Auditor, The Panama Canal.

Approved:
CHESTER HARDING,
Governor.

Office, Filing, and Drafting Room Furniture carried by District Quartermaster, Balboa Heights.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 13, 1920.

To all concerned—The stock of office, filing, and drafting room furniture now carried at Balboa storehouse will hereafter be carried by the District Quartermaster, Balboa Heights.

All items such as chairs, desks, tables, stools, etc., which become surplus, will be shipped and invoiced to the District Quartermaster, Balboa Heights, for physical accounting only.

Furniture in unserviceable condition will be presented for survey and, if in the opinion of the Surveying Officer it is worth repairing, he will direct that same be shipped and invoiced to the District Quartermaster, Balboa Heights, for physical accounting only.

The cost of repairs to furniture turned over to District Quartermaster for reissue will be charged to division to which same is subsequently issued. If no repairs are necessary, issue will be made for physical accounting only.

When additional items of office furniture are required, requisitions will be made on the District Quartermaster, Balboa Heights, and forwarded to the chairman, furniture committee (Property Bureau) for approval, before issue is made. If items required are not on hand, the chairman, furniture committee, will endeavor to fill requisition by transfer from other divisions.

All items of office furniture which become surplus must be transferred to the District Quartermaster, Balboa Heights, unless other disposition is approved by the chairman, furniture committee.

It is requested that all offices arrange to turn over to the District Quartermaster at once all surplus furniture, in order that present shortage of same may be relieved.

R. K. MORRIS,
Chief Quartermaster.

Approved:
CHESTER HARDING,
Governor.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., August 23, 1920.

The following insufficiently addressed mail matter has been received in the office of the Director of Posts and may be obtained upon request of the addressees. Requests for forwarding may be made by telephone, calling No. 182, Balboa:

Asebedo, Mrs. Carmen	Lackner, John
Barnes, Fred M.	McMurtag, W.
Campion, T. A.	McNice, Thomas
Connelly, J. E.	Macfie, Mrs. Sarah A.
Durone, P. F.	Stewart, P. S.
Frazier, T. A.	Thompson, Thomas C.
Haferman & Co., Wm.	or Carmen
Harding, Robert & S.	Williams, Mrs. F. T.
and W. D. Clark	Wycoff, Russell

Binders for The Panama Canal Record.

Cardboard covers, punched and fitted with brass fasteners, forming binders for those who wish to keep a file of the current volume, are offered for sale for 25 cents. Orders may be addressed to THE PANAMA CANAL RECORD Balboa Heights, Canal Zone.

Offices of The Panama Canal and the Panama Railroad may secure binders on application to the Executive Office.

Sale of Typewriters at Balboa Storehouse.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., September 10, 1920, and then opened, for the purchase of about 39 used typewriters on hand at Balboa storehouse. Form of proposal may be had upon application to the office of the General Storekeeper, Balboa, or the office of the Chief Quartermaster, Balboa Heights. The Panama Canal reserves the right to reject any or all bids.

Cable Notice.

Western Union advises that the rate to Tahiti Island via British Pacific is now 10 cents per word more than via British Pacific as quoted in the tariff book.

Additions to Commissary Stock.

Grocery Section.

Biscuits, Jacob's Butter Puffs, 1¼-lb. tin..	$0.68
Biscuits, Jacob's Cream Crackers, 1¼-lb. tin.....	.68
Biscuits, Jacob's Puff Cracknel, ½-lb, tin..	.66
Chow Chow, Heinz, Regal, bot.....	.20
Dressing, salad, Heinz, 10-oz. jar.....	.43
Gherkins, Heinz, sweet, small, picnic, small bot.....	.24
Pickles, Heinz, sweet, mustard, small bot.	.24
Pickles, Heinz, sweet, mustard, med. bot..	.38
Powder, washing, Star Naptha, 8-oz. ctn..	.08
Powder, washing, Star Naptha, 3½-lb. ctn..	31
Preserves, strawberry, Heinz Empress, medium jar.....	.55
Sauce, beefsteak, Heinz, 6-oz. bot.....	.21
Spaghetti, Heinz, 10-oz. tin.....	.13

COMMISSARY NOTES.

Shoe Enamel.

For use in whitening the heels and sole edges of shoes, the commissaries stock a white enamel, at 19 cents per bottle. Ask for stock number 21327.

Shoes.

For the inexpensive white shoe for every-day wear which is in so much demand in the tropics, the commissaries are now offering women's white duck Oxfords with white enameled soles and heels, at $2.25 the pair. Not only is the price very reasonable but the shoe is quite a durable one and should prove popular with the trade.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Volume XIV. Balboa Heights, C. Z., September 1, 1920. No. 3.

CANAL WORK IN JULY.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of July, 1920:

BALBOA HEIGHTS, C. Z., August 26, 1920.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of The Panama Canal for the month of July, 1920:

CANAL TRAFFIC.

The number of ocean-going commercial ships passing through the Canal during the month was 225, in addition to which there were 26 United States Government vessels including 16 United States Navy submarines, 2 Navy colliers, 1 Navy tug, 3 Navy eagle boats, and 4 merchant vessels with coal for the Navy. A detailed classification of the month's traffic is included with this report.

The Panama Canal net tonnage of the 225 commercial vessels aggregated 856,798 tons, 152,086 tons greater than for June. Their registered gross tonnage was 1,109,079 and registered net tonnage, 702,951. The total cargo carried was 886,814 tons of 2,240 pounds, 52,393 tons greater than for the preceding month. Of the total for July, 3,081 tons were carried as deck cargo. The total number of vessels and craft of all kinds through the Canal was 258, as compared with 218 last month. The total tolls earned for July were $842,312.05, as compared with $711,226.90 in June. The average toll-paying vessels per day were 7.6, and the average tolls per vessel, $3,543.64. Tolls collected amounted to $836,298.68.

The average tonnage, Panama Canal measurement, per vessel, was 3,808; United States net equivalent, 3,136; registered gross, 4,929; and registered net, 3,124. The average cargo carried by the laden vessels was 4,571 tons.

The United States coastwise trade for July included 19 vessels with a total Panama Canal net tonnage of 70,840, and cargo of 57,235 tons. There were 10 vessels from the Atlantic to the Pacific with a total tonnage of 32,599 and cargo of 20,797 tons; and from the Pacific to the Atlantic Coast 9 vessels with a total tonnage of 38,241 and cargo of 36,438 tons.

PRINCIPAL COMMODITIES.

Bulk shipments of whole cargoes of the different principal commodities included in the July traffic were:

FROM ATLANTIC TO PACIFIC.

Commodity.	No. of cargoes.	Tons.	Total tons.	From—	To—
Coal	2	6,392	.....	Norfolk	Iquique.
Coal	2	5,899	.....	Norfolk	Arica.
Coal	1	12,264	.....	Norfolk	Balboa.
Coal	1	6,209	.....	Norfolk	Chilean ports.
Coal	1	3,260	.....	Norfolk	Valparaiso.
Coal	1	2,862	.....	Norfolk	Antofagasta.
Coal	1	2,360	.....	Norfolk	Mejillones.
Coal	1	4,092	.....	Newport News	Iquique.
Coal	1	4,025	47,363	Newport News	Arica.
Fuel oil	1	11,343	.....	Tampico	Chilean ports.
Fuel oil	1	9,254	.....	Tampico	Tocopilla.
Fuel oil	1	8,600	.....	Tampico	Pisagua.
Fuel oil	1	7,500	.....	Tampico	Balboa.
Fuel oil	1	4,478	.....	Tampico	Corinto.
Fuel oil	1	10,148	.....	Puerto Lobos	Pisagua.
Fuel oil	1	9,500	.....	Puerto Lobos	Iquique.
Fuel oil	1	10,746	71,569	Palo Blanco	San Francisco.
Steel	1	8,768	.....	New York	Shanghai.
Steel	1	6,284	.....	New York	Kobe.
Steel	1	800	15,852	Mobile	La Union, Salvador.
Sugar	1	.....	5,000	Cuba	British Columbia.
Fuel briquettes	1	.....	3,194	Norfolk	Iquique.
Norway spelter	1	.....	2,000	Christiania	San Francisco.
Coke	1	.....	1,861	Baltimore	Valparaiso.

FROM PACIFIC TO ATLANTIC.

Commodity.	No. of cargoes.	Tons.	Total tons.	From—	To—
Flour	2	13,130	.....	Portland	New York.
Flour	1	6,719	.....	Portland	Belfast.
Flour	1	6,646	.....	Portland	London.
Flour	1	6,239	.....	Portland	Alexandria.
Flour	1	1,154	.....	Portland	Limerick, Ireland.
Flour	1	8,476	.....	Tacoma	Alexandria, Egypt.
Flour	1	7,545	.....	Tacoma	Glasgow.
Flour	1	7,409	.....	San Francisco	Alexandria, Egypt.
Flour	1	5,310	62,628	San Francisco	New York.
Wheat	1	8,221	.....	Portland	Manchester, England.
Wheat	1	7,430	.....	Portland	Lisbon.
Wheat	1	7,265	.....	Portland	Bordeaux.
Wheat	1	6,938	.....	Portland	Liverpool.
Wheat	1	6,886	.....	Portland	Avonmouth, England.
Wheat	1	5,000	.....	Portland	Limerick, Ireland.
Wheat	1	6,374	.....	San Francisco	Dublin, Ireland.
Wheat	1	3,100	51,214	Darien	Copenhagen.
Cold storage food products.	1	10,000	.....	Sydney	London.
Cold storage food products.	1	8,201	.....	Sydney	Rotterdam.
Cold storage food products.	1	5,800	.....	Sydney	New York.
Cold storage food products.	1	6,594	.....	Wellington	London.
Cold storage food products.	1	5,768	.....	Port Chambers	London.
Cold storage food products.	1	4,898	.....	New Plymouth	London.
Cold storage food products.	1	3,800	45,061	Timaru, N. Z.	London.
Nitrate	1	8,666	.....	Chilean ports	New York.
Nitrate	1	8,000	.....	Autofagasta	Rotterdam.
Nitrate	1	5,100	.....	Caleta Colosa	European ports.
Nitrate	1	4,200	.....	Taltal	European ports.
Nitrate	1	3,135	.....	Taltal	New York.
Nitrate	1	3,000	32,101	Talara	San Juan, P. R.
Rice	1	7,612	.....	Saigon, China	Habana, Cuba.
Rice	1	7,100	.....	Saigon, China	Cardenas, Cuba.
Rice	1	6,500	.....	Saigon, China	Cienfuegos, Cuba.
Rice	1	5,000	.....	Hongkong	Cuban ports.
Rice	1	1,200	27,412	San Francisco	Cienfuegos, Cuba.
Lubricating oil	1	11,000	.....	San Francisco	London.
Lubricating oil	1	9,642	20,642	San Francisco	Paulsboro, N. J.
Sugar	1	7,605	.....	Kobe	New Orleans.
Sugar	1	6,596	.....	Philippines	New York.
Sugar	1	3,000	17,201	Philippines	U. S. Atlantic ports.
Lumber	2	4,525	.....	Seattle	Nuevitas, Cuba.
Lumber	1	7,359	.....	Vancouver	Gramgemouth.
Lumber	1	1,127	.....	Vancouver	Glasgow.
Lumber	1	1,100	14,111	Portland	Birmingham, England.

LATIN-AMERICAN TRAFFIC.

Commercial vessels through the Canal en route to the west coast of Central and South America were classified as follows:

Nationality.	No. of ships.	Registered gross tonnage.	Registered net tonnage.	Panama Canal net tonnage.	Cargo.
					Tons.
United States	26	95,520	57,988	71,733	102,599
*British	16	53,724	31,499	37,999	20,075
Chilean	6	23,094	13,574	17,026	12,928
Norwegian	3	16,078	10,158	11,879	21,844
Italian	2	10,035	6,010	7,193	2,186
Peruvian	2	7,922	3,941	5,364	2,188
Swedish	2	7,576	5,714	7,936	6,820
French	1	5,818	3,712	4,106	1,048
Spanish	1	4,600	3,625	3,166	Ballast.
Dutch	1	3,689	2,291	3,660	2,330
Jugoslav	1	3,185	2,034	2,254	4,025
Costa Rican	1	185	172	185	50
Total	62	231,426	149,718	172,561	176,093

*Does not include 1 British cruiser of 5,482 tons displacement.

Five of the above vessels with an aggregate Panama Canal net tonnage of 9,734 were in ballast; 2 from European ports, 2 from Cristobal, and 1 from the United States. Five vessels with a total Panama Canal net tonnage of 4,352, carrying 7,320 tons of cargo, were bound for Central American ports; the remainder for South American

west coast ports. The registry of the vessels, the kind and quantity of their cargo and its destination are shown below:

No. vessels	Registry.	Tons cargo.	Commodity.	Total commodity	Destined to—
9	United States		General	25,118	South American west coast ports.
4	United States	37,591	Fuel oil		South American west coast ports.
1	United States	4,478	Fuel oil	42,069	Cen. American west coast ports.
7	United States		Coal	31,418	South American west coast ports.
1	United States		Fuel briquettes	3,194	South American west coast ports.
3	United States		Ballast		South American west coast ports.
1	United States		Railroad iron	800	Cen. American west coast ports.
12	British		General	18,063	South American west coast ports.
1	British		Cable supplies	20	South American west coast ports.
1	British		Ballast		South American west coast ports.
2	British		General	1,992	Cen. American west coast ports.
5	Chilean		General	10,307	South American west coast ports.
1	Chilean		Coal	2,621	South American west coast ports.
2	Norwegian		Fuel oil	18,754	South American west coast ports.
1	Norwegian		Coal	3,090	South American west coast ports.
2	Italian		General	2,186	South American west coast ports.
2	Peruvian		General	2,188	South American west coast ports.
2	Swedish		General	*6,820	South American west coast ports.
1	French		General	1,018	South American west coast ports.
1	Spanish		Ballast		South American west coast ports.
1	Dutch		General	2,330	South American west coast ports.
1	Jugoslav		Coal	4,025	South American west coast ports.
1	Costa Rican		General	50	Cen. American west coast ports.
62				176,093	

*Includes 583 tons routed to Buenos Aires via steamship *Valparaiso.*

The Latin-American traffic from the west coast of Central and South America for July is classified in the following tabulation:

Nationality.	No. of ships.	Registered gross tonnage.	Registered net tonnage.	Panama Canal net tonnage.	Cargo.
					Tons.
British	21	72,484	43,991	53,542	32,214
United States	16	78,830	49,681	58,831	27,410
Peruvian	4	15,414	8,663	11,064	7,974
Chilean	3	9,734	6,244	7,931	1,677
Norwegian	2	13,948	8,840	10,189	Ballast
Italian	2	13,793	8,113	9,204	7,983
German	2	12,094	7,687	10,289	10,508
Dutch	1	6,424	4,231	4,760	8,000
Costa Rican	1	265	194	207	233
Total	52	222,986	137,644	166,017	96,004

Thirteen of the above vessels were in ballast and 1 carried passengers only; this traffic including 11 oil tankers, 1 collier, 1 tug, and 1 steamship with passengers. Five of the 52 vessels were from Central American ports, the remaining 47 were from South American ports. This traffic is further classified in the following statement:

No. vessels	Registry.	Tons cargo.	Commodity.	Total commodity	Destined to—
9	British	6,749	General		Cristobal.
5	British	17,760	General		United Kingdom.
2	British	4,735	General		United States Atlantic ports.
1	British	2,970	General	32,214	France.
3	British		Ballast		Tampico, Mexico.
1	British		Ballast		United Kingdom.
5	United States	19,891	General		United States Atlantic ports.
2	United States	1,384	General		Cristobal.
1	United States	3,135	Nitrate		United States Atlantic port.
1	United States	3,000	Nitrate	6,135	Porto Rico.
6	United States		Ballast		Mexican ports.
1	United States		Ballast		United States Atlantic port.
3	Peruvian	5,846	General		Cristobal.
1	Peruvian	2,128	General	7,974	United Kingdom.
2	Chilean		General	1,677	Cristobal.
2	Norwegian		Ballast		Tampico, Mexico.
2	Italian		General	7,988	Genoa, Italy.
2	German		Nitrate and ore	10,508	United Kingdom.
1	Dutch		Nitrate	8,000	Rotterdam.
1	Costa Rican		Logs	233	Cristobal.
52				96,004	

Forty-nine of the vessels passing through the Canal during July were under control of the United States Shipping Board, combining a total Panama Canal net tonnage of 202,022 and carrying 261,158 tons of cargo. Twenty-nine were northbound with a total tonnage of 131,658 and cargo of 180,496 tons; 20 were southbound with a tonnage of 70,364 and cargo of 80,662 tons.

PRINCIPAL TRADE ROUTES.

Statements attached to this report show the distribution of the cargo through the Canal this month (*see* pages 37, 38, and 39); the tabulation following gives the classification of the traffic according to the principal trade routes.

	Total vessels.			Vessels in ballast.	
	Vessels.	Panama Canal net tonnage.	Cargo.	Vessels.	Panama Canal net tonnage.
Atlantic to Pacific.					
United States to west coast of South America	22	64,236	79,354	1	5,220
Cristobal to west coast of South America	17	24,077	12,117	2	124
United States to Far East	13	61,578	92,069	.....	.....
Europe to west coast of South America	10	43,121	19,142	2	4,390
United States coastwise	10	32,599	20,797	1	2,940
Mexico to west coast of South America	6	29,787	56,345	.....	.....
United States to Australia and New Zealand	5	25,864	34,977	.....	.....
Europe to Australia and New Zealand	4	29,826	37,539	.....	.....
Europe to west coast of United States	4	12,366	8,000	2	4,231
Cristobal to west coast of United States	3	3,937	2,064	1	742
Cristobal to west coast of Central America	3	1,583	2,042	.....	.....
North Colombian ports to west coast of South America	2	6,988	1,815	.....	.....
Cuba to British Columbia	2	8,307	9,800	.....	.....
Mexico to west coast of United States	1	5,342	10,746	.....	.....
East coast of United States to British Columbia	1	5,448	6,232	.....	.....
East coast to west coast of United States (not coastwise)	1	4,082	.....	1	4,082
Mexico to west coast of Central America	1	2,316	4,478	.....	.....
United States to west coast of Central America	1	453	800	.....	.....
Total	106	361,850	398,317	10	21,729
Pacific to Atlantic.					
West coast of South America to Cristobal	14	20,299	13,896	.....	.....
West coast of United States to Europe	13	62,105	93,081	.....	.....
*West coast of South America to Europe	12	48,298	45,151	1	105
West coast of South America to Mexico	11	53,710	.....	11	53,710
Australia and New Zealand to Europe	9	65,849	58,191	.....	.....
Far East to east coast of United States	9	44,347	72,216	.....	.....
United States coastwise	9	38,241	36,438	3	14,234
West coast of South America to United States	9	34,650	27,761	1	6,930
Far East to Europe	4	22,948	28,711	.....	.....
Far East to Cuba	4	18,600	29,212	.....	.....
West coast of United States to Mexico	3	16,097	.....	3	16,097
West coast of United States to Egypt	3	15,470	22,124	.....	.....
West coast of United States to Cuba	3	4,414	5,725	.....	.....
West coast of Central America to Cristobal	3	1,605	1,993	.....	.....
Australia and New Zealand to United States	2	12,207	13,868	.....	.....
Philippines to east coast of United States	2	9,745	15,376	.....	.....
British Columbia to Europe	2	8,831	15,548	.....	.....
West coast of Central America to Europe	2	5,528	4,203	.....	.....
West coast of United States to Cristobal	2	3,756	2,003	.....	.....
British Columbia to Mexico	1	6,321	.....	1	6,321
West coast of South America to Porto Rico	1	1,927	3,000	.....	.....
Total	118	494,948	488,497	20	97,397

The statement of traffic from the Atlantic to the Pacific does not include 1 British cruiser of 5,482 tons displacement, bound from British West Indies to west coast of South America.

* One vessel of 2,286 tons net, Panama Canal measurement, carried passengers only.

SERVICES TO CANAL SHIPPING.

Miscellaneous repairs were made at Cristobal and Balboa shops and dry docks on 136 vessels and craft during July; 79 at Cristobal and 57 at Balboa. Of these 29 were dry-docked, 14 at Cristobal and 15 at Balboa. Bunker coal in the amount of 42,337 tons was supplied to 123 commercial vessels; 39,280 tons to 101 vessels at Cristobal, and 3,057 tons to 22 vessels at Balboa. Twenty-nine commercial vessels were furnished a total of 55,907 barrels of fuel oil; 3 with 1,718 barrels at Cristobal, and 26 with 54,189 barrels at Balboa. There were 294 vessels supplied with 12,814,322 gallons of water; 177 at Cristobal with 10,233,572 gallons, and 117 with 2,580,750 gallons at Balboa. Sales of commissary supplies to commercial vessels other than those of the Panama Railroad Steamship Line aggregated $116,383.45, including $6,529.61 for laundry service, these sales were made to 171 vessels at Cristobal in the

amount of $82,490.81, and to 89 vessels at Balboa in the amount of $33,892.64. Charges for tug service for vessels using the Canal and the terminal ports totaled $24,030.75, of which $14,333.65 was earned at Cristobal and $9,697.10 at Balboa

STATEMENT OF OPERATIONS.

Item.	Cristobal.	Balboa.	Total.
Commercial vessels passing through the Canal	107	118	225
New tonnage of above commercial vessels, Panama Canal measurement	361,850	494,948	856,798
United States equivalent net tonnage of commercial vessels	295,834	409,809	705,643
Registered gross tonnage of commercial vessels	469,188	639,891	1,109,079
Registered net tonnage of commercial vessels	295,519	407,432	702,951
Cargo through the Canal in commercial vessels, tons of 2,240 pounds	398,317	488,497	886,814
Deck load cargo included in above ... tons	730	2,351	3,081
Nationality of commercial vessels through the Canal:			
British	*33	35	68
Chilean	6	3	9
Chinese	...	1	1
Costa Rican	1	1	2
Cuban	...	1	1
Danish	...	3	3
Dutch	1	1	2
French	3	...	3
German	...	2	2
Italian	2	2	4
Japanese	3	6	9
Jugoslav	1	...	1
Norwegian	4	2	6
Peruvian	2	4	6
Spanish	1	...	1
Swedish	2	...	2
United States	48	57	105
Total	107	118	225
Panama Canal net tonnage of commercial vessels by nationality:			
British	123,421	144,351	267,772
Chilean	17,026	7,931	24,957
Chinese	...	4,432	4,432
Costa Rican	185	207	392
Cuban	...	702	702
Danish	...	16,224	16,224
Dutch	3,660	4,760	8,420
French	8,397	...	8,397
German	...	10,289	10,289
Italian	7,193	9,204	16,397
Japanese	13,616	28,466	42,082
Jugoslav	2,254	...	2,254
Norwegian	15,765	10,189	25,954
Peruvian	5,364	11,064	16,428
Spanish	3,166	...	3,166
Swedish	7,936	...	7,936
United States	153,867	247,129	400,996
Total	361,850	494,948	856,798
United States equivalent net tonnage of commercial vessels by nationality:			
British	100,463	118,751	219,214
Chilean	12,798	5,818	18,616
Chinese	...	3,792	3,792
Costa Rican	172	194	366
Cuban	...	578	578
Danish	...	13,934	13,934
Dutch	3,256	4,198	7,454
French	7,877	...	7,877
German	...	7,712	7,712
Italian	5,797	7,049	12,846
Japanese	11,683	24,823	36,506
Jugoslav	1,951	...	1,951
Norwegian	13,268	8,862	22,130
Peruvian	2,818	7,603	10,421
Spanish	2,877	...	2,877
Swedish	4,598	...	4,598
United States	128,276	206,495	334,771
Total	295,834	409,809	705,643
Registered gross tonnage of commercial vessels by nationality:			
British	161,710	190,730	352,440
Chilean	23,094	9,734	32,828
Chinese	...	6,026	6,026
Costa Rican	185	265	450
Cuban	...	1,050	1,050
Danish	...	20,569	20,569
Dutch	3,689	6,424	10,113

*Includes 1 British cruiser.

Item.	Cristobal.	Balboa.	Total.
Registered gross tonnage of commercial vessels by nationality—Contd:			
French	10,617	.....	10,617
German	.....	12,094	12,094
Italian	10,035	13,793	23,828
Japanese	17,609	37,271	54,880
Jugoslav	3,185	.....	3,185
Norwegian	20,972	13,948	34,920
Peruvian	7,922	15,414	23,336
Spanish	4,600	.....	4,600
Swedish	7,576	.....	7,576
United States	197,994	312,573	510,567
Total	469,188	639,891	1,109,079
Registered net tonnage of commercial vessels by nationality:			
British	100,658	118,783	219,441
Chilean	13,574	6,244	19,818
Chinese	.....	3,871	3,871
Costa Rican	172	194	366
Cuban	.....	577	577
Danish	.....	13,915	13,915
Dutch	2,291	4,231	6,522
French	7,627	.....	7,627
German	.....	7,687	7,687
Italian	6,010	8,113	14,123
Japanese	11,574	24,261	35,835
Jugoslav	2,034	.....	2,034
Norwegian	13,212	8,840	22,052
Peruvian	3,941	8,663	12,604
Spanish	3,625	.....	3,625
Swedish	5,714	.....	5,714
United States	125,087	202,053	327,140
Total	295,519	407,432	702,951
Cargo carried by commercial vessels by nationality:			
British	131,842	128,861	260,703
Chilean	12,928	1,677	14,605
Chinese	.....	6,500	6,500
Costa Rican	50	233	283
Cuban	.....	1,200	1,200
Danish	.....	27,293	27,293
Dutch	2,330	8,000	10,330
French	1,048	.....	1,048
German	.....	10,508	10,508
Italian	2,186	7,988	10,174
Japanese	18,280	46,420	64,700
Jugoslav	4,025	.....	4,025
Norwegian	23,844	.....	23,844
Peruvian	2,188	7,974	10,162
Spanish	.....	.....	.....
Swedish	6,820	.....	6,820
United States	192,776	241,843	434,619
Total	398,317	488,497	886,814
Tolls levied against commercial vessels by nationality:			
British	$127,173.32	$143,631.37	$270,804.69
Chilean	15,871.15	6,818.20	22,689.35
Chinese	.....	4,740.00	4,740.00
Costa Rican	215.00	242.50	457.50
Cuban	.....	722.50	722.50
Danish	.....	17,417.50	17,417.50
Dutch	4,070.00	5,247.50	9,317.50
French	7,723.25	.....	7,723.25
German	.....	9,640.00	9,640.00
Italian	7,246.25	8,811.25	16,057.50
Japanese	14,425.95	30,669.00	45,094.95
Jugoslav	2,438.75	.....	2,438.75
Norwegian	16,585.00	7,336.08	23,921.08
Peruvian	3,522.50	9,381.05	12,903.55
Spanish	2,279.52	.....	2,279.52
Swedish	5,747.50	.....	5,747.50
United States	157,442.30	232,914.61	390,356.91
Total	$364,740.49	$477,571.56	$842,312.05
Vessels passing through the Canal free of tolls:			
U. S. Navy submarines	10	6	16
U. S. Navy colliers	.....	2	2
U. S. Navy tug	1	.....	1
U. S. Navy Eagle boats	3	.....	3
Merchant vessels with coal for U. S. Navy	4	.....	4
Total	18	8	26

Item.	Cristobal.	Balboa.	Total.
Yachts, ocean-going, passing through the Canal	2	2	4
Net tonnage of above, Panama Canal measurement	169	735	904
Total ocean-going vessels passing through the Canal	127	128	255
Launches passing through the Canal	3	.....	3
Net tonnage of above, Panama Canal measurement	11	.....	11
Total vessels and craft passing through the Canal	130	128	258
Cargo on which no tolls were charged ... tons	23,253	.....	23,253
Commercial vessels through the Canal without cargo but not in ballast	1	.....	1
Net tonnage of above, National measurement	1,665	.....	1,665
Commercial vessels through the Canal in ballast	10	20	30
Net tonnage of above, Panama Canal measurement	21,729	97,397	119,126
Vessels with passengers only through the Canal	.....	1	1
Net tonnage of above, Panama Canal measurement	.....	2,286	2,286
Motor vessels through the Canal	7	7	14
Net tonnage of above, Panama Canal measurement	12,598	20,858	33,456
Sailing vessels through the Canal	3	.....	3
Net tonnage of above, Panama Canal measurement	5,455	.....	5,455
Tolls levied on laden vessels through the Canal	$346,147.05	$404,317.35	$750,464.40
Tolls levied on vessels in ballast through the Canal	$15,862.44	$70,511.01	$86,373.45
Tolls levied on displacement tonnage through the Canal	2,741.00	.....	2,741.00
Tolls levied on vessels with passengers only through the Canal	.....	2,743.20	2,743.20
Tolls levied on ocean-going yachts through the Canal	121.68	529.20	650.88
Tolls levied on launches through the Canal	8.25	.....	8.25
Total tolls levied	$364,880.42	$478,100.76	$842,981.18
Total vessels entering port, including Canal transit	284	245	529
Total vessels clearing port, including Canal transit	277	247	524
Total vessels entered and cleared	561	492	1,053
Registered gross tonnage of vessels entering port	1,422,021	1,144,151	2,566,172
Registered gross tonnage of vessels clearing port	1,396,960	1,150,332	2,547,292
Total for vessels entering and clearing	2,818,981	2,294,483	5,113,464
Net registered tonnage of vessels entering port	869,903	725,349	1,595,252
Net registered tonnage of vessels clearing port	854,670	730,571	1,585,241
Total for vessels entering and clearing	1,724,573	1,455,920	3,180,493
Vessels entering port but not passing through the Canal	57	3	60
Gross tonnage of vessels entering port but not passing through the Canal	265,302	10,194	275,496
Net tonnage of above	163,671	8,117	171,788
Vessels clearing port but not passing through the Canal	53	5	58
Gross tonnage of above	255,814	16,164	271,978
Net tonnage of above	154,627	13,052	167,679
Vessels passing through Canal and handling passengers or cargo at port—entering	49	55	104
Gross tonnage of above	210,137	186,056	396,193
Net tonnage of above	126,079	112,151	238,230
Vessels passing through Canal and handling passengers or cargo at port—clearing	50	55	105
Gross tonnage of above	257,141	187,995	444,136
Net tonnage of above	128,369	113,821	242,190
Transit cargo arriving ... tons	933,488	841,191	1,774,679
Transit cargo cleared ... tons	887,479	849,496	1,736,975
Total transit cargo ... tons	1,820,965	1,690,687	3,511,652
Local cargo arriving ... tons	42,879	25,274	68,153
Local cargo shipped ... tons	4,688	800	5,488
Total local cargo ... tons	47,567	26,074	73,641
Cargo received for transshipment ... tons	33,425	8,962	42,387
Cargo transshipped ... tons	50,773	1,597	52,370
Total cargo arriving ... tons	1,009,792	875,427	1,885,219
Total cargo cleared ... tons	942,940	851,893	1,794,833
Cargo received by Receiving and Forwarding Agency, P. R. R. ... tons	56,067	6,805	62,872
Cargo dispatched by Receiving and Forwarding Agency, P. R. R. ... tons	54,739	8,187	62,926
Cargo rehandled by Receiving and Forwarding Agency, P. R. R. ... tons	3,553	658	4,211
Total cargo handled by Receiving and Forwarding Agency, P.R.R. ... tons	114,359	15,650	130,009
Cargo stevedored, included in above ... tons	54,908	840	55,748
Commercial vessels, other than P. R. R., supplied with bunker coal	99	22	121
Coal supplied above vessels ... tons	38,979	3,057	42,036
Panama Railroad vessels supplied with bunker coal	2	.....	2
Coal supplied above vessels ... tons	401	.....	401
U. S. Army vessels supplied with bunker coal	5	2	7
Coal supplied above vessels ... tons	498	17	515
Total vessels supplied with bunker coal from Panama Railroad deposits	106	24	130
Total coal furnished above vessels ... tons	39,878	3,074	42,952

Item.	Cristobal.	Balboa.	Total.
Coal supplied Panama Railroad departments.....tons..	1,063	40	1,103
Coal supplied U. S. Army, excepting vessels.....tons..	170	.....	170
Coal supplied The Panama Canal.....tons..	1,998	317	2,315
Coal supplied individuals and companies.....tons..	436	.....	436
Total coal furnished from Panama Railroad deposits.....tons..	43,545	3,431	46,976
Coal received during July.....tons..	26,048	11,023	37,071
Coal on hand, August 1, 1920.....tons..	28,406	13,153	41,559
Coal on hand, July 1, 1920.....tons..	45,903	5,561	51,464
Coal—U. S. Navy Account.			
Coal furnished U. S. Navy, including vessels.....tons..	1,641	801	2,442
Coal received during July.....tons..	2,008	.....	2,008
Coal on hand, August 1, 1920.....tons..	67,862	23,697	91,559
Coal on hand, July 1, 1920.....tons..	67,495	24,498	91,993
Commercial vessels other than Panama Railroad supplied with fuel oil from Panama Canal tanks.....	2	25	27
Fuel oil sold to above vessels.....barrels..	552	52,636	53,188
Fuel oil furnished Panama Railroad vessels.....barrels..	1,166	1,553	2,719
Fuel oil issued to U. S. Navy.....barrels..	306	.....	306
Fuel oil issued to U. S. Army.....barrels..	.....	124	124
Fuel oil issued to Canal departments.....barrels..	7,368	30,664	38,032
Fuel oil sold to individuals and companies.....barrels..	194	5,982	6,176
Total fuel oil furnished from Panama Canal tanks.....barrels..	9,586	90,959	100,545
Fuel oil received during July.....barrels..	.....	104,774	104,774
Fuel oil on hand, August 1, 1920.....barrels..	13,353	23,173	36,526
Fuel oil on hand, July 1, 1920.....barrels..	22,939	9,358	32,297
Other oil pumped for individuals and companies.....barrels..	139,568	56,583	196,151
Diesel oil issued during July.....barrels..	.....	20	20
Diesel oil on hand, August 1, 1920.....barrels..	.....	1,134	1,134
Vessels supplied with water.....	177	117	294
Water sold to above vessels.....gallons..	10,233,572	2,580,750	12,814,322
Vessels on which miscellaneous repairs were made.....	65	42	107
Vessels dry-docked.....	14	15	29
Commercial vessels furnished commissary supplies.....	171	89	260
Panama Railroad vessels furnished commissary supplies.....	12	.....	12
Other U. S. Government vessels furnished commissary supplies.....	14	10	24
Total vessels furnished commissary supplies.....	197	99	296
Commissary sales to commercial vessels:			
Ice.....	$3,119.95	$671.85	$3,791.80
Wholesale groceries.....	14,389.14	7,932.98	22,322.12
Wholesale cold storage.....	55,436.85	21,828.62	77,265.47
Laundry.....	6,529.61	.....	6,529.61
Miscellaneous.....	3,015 26	3,459.19	6,474.45
Total.....	$82,490.81	$33,892.64	$116,383.45
Commissary sales to Panama Railroad vessels:			
Ice.....	$162.00	.....	$162.00
Wholesale groceries.....	2,467.55	427.47	2,895.02
Wholesale cold storage.....	8,670.24	969.41	9,639.65
Laundry.....	1,984.62	.....	1,984.62
Miscellaneous.....	696.67	54.17	750.84
Total.....	$13,981.08	$1,451.05	$15,432.13
Commissary sales to other Government vessels:			
Ice.....	$141.22	$140.72	$281.94
Wholesale groceries.....	4,949.32	14,945.08	19,894.40
Wholesale cold storage.....	18,953.49	17,643.11	36,596.60
Laundry.....	1,057.25	15.30	1,072.55
Miscellaneous.....	809.31	1,502.21	2,311.52
Total.....	$25,910.59	$34.246.42	$60,157.01
Total commissary sales to all vessels.....	$122,382.48	$69,590.11	$191,972.59
Passengers arriving, including transit passengers:			
First cabin.....	3,513	4,233	7,746
Other than first cabin.....	5,327	2,613	7,940
Total.....	8,840	6,846	15,686
Passengers departing, including transit passengers:			
First cabin.....	3,737	4,198	7,935
Other than first cabin.....	5,555	2,497	8,052
Total.....	9,292	6,695	15,987
Total movement of passengers.....	18,132	13,541	31,673

Item.	Cristobal.	Balboa.	Total.
Passengers disembarking:			
First cabin	1,657	208	1,865
Other than first cabin	1,002	169	1,171
Total	2,659	377	3,036
Passengers embarking:			
First cabin	1,941	173	2,114
Other than first cabin	1,230	53	1,283
Total	3,171	226	3,397
Services to American seamen:			
Seamen shipped	336	119	455
Seamen paid off	153	60	213
Seamen deserted	11	9	20
Seamen deceased	.....	.....	.....
Seamen lodged and subsisted	35	15	50
Seamen repatriated	35	8	43
Wages of American seamen:			
Total amount earned	$16,573.51	$9,839.54	$26,413.05
Deductions approved by Deputy Shipping Commissioners	5,173.84	2,955.44	8,129.28
Balance due seamen	$11,399.67	$6,884.10	$18,283.77
Paid to seamen	5,464.68	4,782.47	10,247.15
Received on deposit for seamen	5,934.99	*2,746.63	8,681.62
Services to American vessels:			
Crews shipped	2	.....	2
Crews paid off	2	.....	2
Shipping articles written	2	.....	2
Marine notes of protest noted	15	7	22
Bills of health issued	146	118	264
Clearances issued	155	111	266

* Includes $645 immigration deposits.

LOCK OPERATION.

Lockages of commercial vessels for July were as follows:

	Number of lockages.			Number of vessels.		
	North.	South.	Total.	North.	South.	Total.
Gatun	116	100	216	120	114	234
Pedro Miguel	116	108	224	118	110	228
Miraflores	116	105	221	118	110	228

All lockages, including Army and Navy vessels, those of the Panama Railroad and The Panama Canal, are shown in the following statement of lockages for July:

Lockages.	Gatun.	Pedro Miguel.	Miraflores.
Commercial	216	224	221
Noncommercial, Army and Navy	10	9	9
Noncommercial, Canal equipment	9	20	18
Total	235	253	248
Vessels.			
Commercial	234	228	228
Noncommercial, Army and Navy	10	9	9
Noncommercial, Canal equipment	9	20	18
Total	285	297	300

The total consumption of water for lockages during July was 1,708,350,000 cubic feet. The consumption by lockages was as follows:

	Gatun.	Pedro Miguel.	Miraflores.
	Cubic feet.	*Cubic feet.*	*Cubic feet.*
Lockage	926,740,000	781,610,000	758,280,000
Leakage	20,000,000	56,440,000	15,000,000
Maintenance	.....	.....	.....
Total	946,740,000	838,050,000	773,280,000

METEOROLOGY.

The total rainfall for the month in the Canal Zone and vicinity ranged from 6.18 inches at Balboa Heights to 24.63 inches at the Chilibrillo station, and was unusually heavy over the Upper Chagres River. At Juan Mina, Alhajuela, Vigia, Chilibrillo,

Indio, Frijoles, Gatun River, Gatun, and Brazos Brook, the July rainfall exceeded the total at these stations for the period from January to June, 1920, inclusive. A hail storm was reported as occurring on the 24th in a region about 2½ miles north of Empire; the storm moving from the southwest to the northeast. On the following day a storm of the tornado type swept over San Carlos, Republic of Panama, causing considerable damage.

The estimated July rainfall over the Gatun Lake watershed was 15.70 inches, compared with a 10-year mean of 11.37 inches; over the Chagres River above Alhajuela it was 19.19 inches, compared with a 19-year mean of 14.86 inches. The greatest amount of rainfall occurring on any one day was 5.64 inches at Vigia on the 16th. The Chagres River discharge at Alhajuela was 3,039 c. f. s., being 6 per cent above the 19-year July average of 2,856 c. f. s., and furnished 37 per cent of the Gatun Lake total yield. This is the first time in the last 15 months, and the second time in 20 months, that the discharge of the Chagres River has been above its monthly normal.

The Gatun Lake watershed total yield was 8,256 c. f. s., 20 per cent above the 10-year mean of 6,858 c. f. s. The maximum July total yield since the existence of the lake was 10,967 c. f. s., in 1915, and the minimum total yield was 2,677 c. f. s. in 1914. The net yield for the month was 7,788 c. f. s. The maximum July net yield of record was 10,376 c. f. s. in 1915, and the minimum net yield was 1,898 c. f. s. in 1914. Gatun Lake varied from a minimum elevation of 82.79 feet on the 3d to a maximum elvation of 85.67 feet on the 31st. The increase in storage was 12.57 billion cubic feet, which is the largest monthly increase in storage since the lake attained operating level in 1914. The consumption of 1,657 c. f. s. at the hydroelectric plant during July was the heaviest on record. The draft on the lake for lockage and hydroelectric power was 2,295 c. f. s., the highest on record, being 5 c. f. s. higher than in December, 1919, the month of maximum lockages since the operation of the Canal. Miraflores Lake varied from a maximum elevation of 54.09 feet on the 4th to a minimum elevation of 52.24 feet on the 20th, ending at 53.01 feet on the 31st.

Three slight seismic tremors were recorded by the Balboa Heights seismographs on the 1st, 16th, and 19th. None of these were of sufficient intensity to be felt in the Canal Zone.

ELECTRICAL DIVISION.

Gatun hydroelectric station—The gross output of this station for July was 5,994,200 KWH on a computed water consumption of 4,438,210,000 cubic feet.

Miraflores steam plant—The gross output of this plant was 15,330 KWH with an oil consumption of 2,125 barrels; the plant was operated for stand-by purposes only.

Total power output—The total gross output of both stations was 6,009,530 KWH. The total power distributed to consumers was 4,948,356 KWH. The total loss of power in plant auxiliaries, transmission, and transformation was 1,061,174 KWH, or 17.65 per cent of the gross output.

There were 8 operations of the Gatun spillway during July, all being for the regulation of the level of the lake. These are the first operations of the spillway for the lowering of the lake level since December 15, 1919. But one interruption to transmission line service occurred during the month. All substations were operated without any extraordinary occurrences; the construction work under way at the substations remains as reported for May, 1920. Miscellaneous repairs and installations of electrical equipment were made on 68 vessels during the month; 31 at Cristobal and 37 at Balboa.

Construction work for the Army is separately reported.

SHOP, FOUNDRY, AND DRY DOCK WORK.

Work on the repairs to the steamship *Marne* was begun at Balboa as soon as possible after her arrival at the plant on July 3. It is estimated that this work will cost approximately two-thirds of a million dollars and consume about 6 months. The tangled mass of wreckage amidships of what was formerly her deck houses, and shelter deck structure was removed during the month, together with her poop and forecastle structures, bulwark plating and most of the shelter deck plates; so that the vessel has practically been stripped to the weather deck beams. All the machinery has been removed to the shops and the boiler room cleared out, leaving the boilers in place. It is evident that the boilers, main turbines, and very nearly all of the auxiliary machinery have not been badly damaged and will be thoroughly serviceable after overhauling. A considerable amount of shopwork has been performed on the vessel, and at the end of the month some of the steel work removed to the shops and worked back into shape was being replaced on the ship.

The steamship *Silverado* was towed to the Balboa plant with a broken crank shaft. The after web of the low pressure crank was broken through. It was decided to make a new section of shaft carrying the low pressure crank, the after end of the shaft and

coupling, and to attach it to the forward part of the old shaft. The remaining part of the low pressure crank was cut from the forward section of shaft and the end turned down. The new forging was made, rough machined, twice annealed, bored at the forward crank web to suit the turned down portion of the old shaft, shrunk on, and keyed, when the assembled shaft was finished, machined, and trued up.

The turbine steamship *Westward Ho* arrived at the Balboa plant with a portion of the blading of her main propelling turbines stripped. Her turbine was of the same size and manufacture as that installed on the steamship *Cansumset* in June. Fortunately the turbine removed from the *Cansumset* had not been shipped from the Isthmus, and sufficient parts were recovered from it in good condition to replace the damaged parts on the turbine of the *Westward Ho.*

Considerable repair work was done for the Navy during the month, including repairs to the submarines *O–11, O–12, O–13, O–14, O–15, O–16*, to the cruisers *Cleveland* and *Tacoma*, the U. S. S. *Sciota*, Eagle *No. 14*, and the Eagle *Earp*. In addition to these, the following vessels received miscellaneous repairs at the Balboa plant: U. S. S. *Gen. Geo. W. Getty*, subchaser *No. 284*; steamships *Adria, Ardmore, Askawaka, Benjamin Brewster, Caddo, Coalinga, Cordelia, Cristobal, Dungannon, Easterling, Effingham, Eldena, Guatemala, Hwah Yah, Lake Elkwater, La Habra, Lompoc, Los Angeles, Margaret Coughlan, Mina Brea, Olockson, Point Adams, San Juan, S. V. Harkness, Seiyo Maru, Sherman, Silverado, West Camak, West Mahomet;* collier *Ulysses*, dredge *Culebra*, launch *Vacuum, Jr.*, tender *Perico*, schooners *Challamba, Laura C. Hall*, and *Valparaiso;* barges *Nos. 4* and *136;* and tugs *Gatun* and *Gorgona*. Of these the following were dry-docked: U. S. submarines *O–11, O–12, O–13, O–14, O–15, O–16*; steamships *Guatemala, Hwah Yah, Lake Elkwater, La Habra, Mina Brea;* barges *Nos. 4* and *136*; and tugs *Gatun* and *Gorgona*.

The more important ship repairs at the Cristobal plant included those to 6 commercial vessels and 3 United States Government vessels. The feed water heater, ice machine, and other auxiliaries of the steamship *Coushatta* were overhauled. The heater coils, windlass, oil pump, and hawse pipe of the auxiliary schooner *Juneau* were repaired. The steamship *Lake Farrington* received an extensive overhaul of her pumps, ice machine, boilers, and other auxiliaries. The decks of the steamship *Harrish* were caulked and her anchor windlass, steering engine, ice machine, blower engine, and pumps were repaired. The steamship *Covena* had her circulator shaft renewed and various repairs made. The extensive overhaul of turbines and gears of the U. S. S. Eagle *No. 32* were completed during the month. The main feed pump of the U. S. A. T. *Edellyn* was repaired, new coils for evaporator manufactured and her boilers electric welded and caulked. There was a general overhaul of engines and auxiliaries of the U. S. cableship *Cyrus W. Field*. In addition the following vessels received miscellaneous repairs at Cristobal: U. S. A. T. *Buford* and U. S. S. Eagle *No. 14*; steamships *Acajutla, Advance, Afalkey, Allianca, Ancon, Balboa, Bantu, Bologna, Caribbean, Cartago, Cartona, Cauca, Chile, Colon, Cristobal, Cuba, Europa, Fairhaven, Farraday, General Goethals, General Gorgas, General Hodges, Guatemala, Haiti, Hayden, Haxtum, Heredia, Jamaica, Lake Flynus, Larne, Mantaro, Metapan, Newport, Nika, Paiti, Panama, Parismina, Point Adams, Point Judith, Saint Louis, Salvador, San Jose, San Juan, Ucayali, Ulua, Van Rensselaer*, and *Wilhelm Jebsen*, barges Nos. *27, 29, 47, 87, 105, 109, Darien*, and old French lighter; launches *Activo, Capron, Conroy*, and *Putnam*; schooners *Juneau, Laura, C. Hall, Linda S., Rosana*, and *Tahitian Maiden*; tugs *Favorite, Porto Bello, St. Mabyn, St. Teath*, and *Tavernilla*, and yacht *Wilk Duck*. Of these vessels the following were dry-docked: U. S. S. Eagle *No. 14*, cable ship *Cyrus W. Field*, barges Nos. *27, 29, 47, 87, 105, 109*, and old French lighter; launch *Putnam*, schooners *Laura C. Hall, Linda S.*, and *Rosana*, and tug *Porto Bello*.

The output of the Mechanical Division in patterns, castings, and other foundry production for July, as compared with the preceding month, is shown below:

	July.			June.		
	Patterns.	*Castings.*	*Pounds.*	*Patterns.*	*Castings.*	*Pounds.*
Iron	39	1,538	103,719	30	1,208	64,851
Steel	11	609	64,576	5	266	55,382
Brass	14	1,378	20,402	9	846	9,364

The ordinary repair and maintenance work of the Mechanical Division for July included among other items the following:

Cars repaired	1,877
Locomotives and cranes repaired	1,186
Passenger coaches packed, cleaned, oiled, and inspected	3,841

Freight cars repacked	234
Locomotives hostled	1,565
Cranes hostled	211
Locomotives ridden	73
Locomotives inspected	94
Crews instructed in handling locomotives	12
Crews instructed in oil and fuel economy	27
Crews instructed in air brakes	13
Cranes, locomotive, inspected	27

BUILDING CONSTRUCTION.

The statement following represents the degree of completion, July 31, of the more important construction work performed by the Building Division:

Colon stables:	
East half—	
Six stables	(*)
One latrine	†85
Deposit pits	100
West half—	
Six stables	80
Five wagon sheds	†90
One feed room	†5
One shop building	10
Silver townsite, Mount Hope:	
Commissary	†80
Two houses, married quarters	100
Two houses, married quarters	100
Two houses, married quarters	100
Two houses, married quarters	100
Four houses, married quarters	95
Six houses, married quarters	90
Two houses, married quarters	80
Four houses, married quarters	60
Two houses, married quarters	50
Two houses, married quarters	40
Ten houses, married quarters	25
One house, married quarters	20
Two 30-room bachelor quarters	5
Two 30-room bachelor quarters	(‡)
Cristobal incinerator	97
Combination shop and storehouse	65
Royal Mail Steam Packet Company's office, Cristobal	35
Oil tank (55,000 barrels capacity), Cristobal	†98
Moving and re-erecting 2 type-7 houses from Las Cascadas to Gatun	95
Applying Specification roofing, cold storage plant, Cristobal	100
Applying Specification roofing, Pier 6, Cristobal	75
Lighthouse, end of breakwater, Cristobal	†25
National Catholic War Council building, Balboa	48
Bake shop, workroom, and storage room building, Ancon Hospital	†75
Oil tank (55,000 barrels capacity), Balboa	75
Alterations, Balboa clubhouse	100
Alterations, Ancon restaurant	†95
Demolition of old French pier, La Boca	†75
Moving 3 type-7 houses from Las Cascadas to Pedro Miguel	100
Moving two 4-family quarters from Las Cascadas to Quarry Heights	65
Moving two 4-family quarters from Las Cascadas to Quarry Heights	55
Moving house 47 from Las Cascadas to La Boca	95
Addition to nurses' quarters, Corozal	100
Moving old Ancon school building to Balboa	20

*Completed except plastering. No work done during the month.
†No work done during the month.
‡Footings poured.

Building construction performed for the Army and Navy is separately reported.

DREDGING DIVISION.

The general movement of material in Cucaracha slide continued during July. Two dipper dredges removed 337,300 cubic yards of earth and rock from the slide area extending over the Canal prism between stations 1805 and 1814 into the proposed basin at the foot of Cucaracha slide and reaching the eastern dredging limit at one place. A channel of ample depth and full width was maintained throughout the month without interference with Canal traffic.

Including the excavation of this month, the dredges have removed a total of 1,730,700 cubic yards of earth and rock from this area since the slide of February 22, 1920. Grader No. 3, engaged continuously during the month, removed an estimated total of 35,000 cubic yards of material from the slide.

The total excavation by dredges during July was 533,214 cubic yards, as follows:

Cubic yards.	Classified as— Earth.	Rock.	Character of work.	Stations.	Equipment
				Cucaracha Slide.	
(a) 62,100	15,500	46,600	Maintenance.....	1805-00 to 1814-00 E. and W.....	*Cascadas.*
(a) 88,200	22,100	66,100	Maintenance.....	1805-00 to 1814-00 E. and W.....	*Paraiso.*
(a) 187,000	46,800	140,200	Maintenance.....	1805-00 to 1814-00 E. and W.....	*Gamboa.*
				Barge repair slide.	
(a) 18,700 (Relayed)	10,000	8,700	Maintenance.....	1750-00 to 1760-00 W.....	*Paraiso.*
				Gaillard Cut.	
(a) 50,000	37,500	12,500	Maintenance.....	1834-50 to 1823-00 E. and W.....	**No. 86.*
(b) 5,000	5,000	.....	Construction.....	Balboa inner harbor.....	*No. 84.*
(b) 85,000	85,000 Sand.	.....	Maintenance.....	Balboa inner harbor.....	*No. 84.*
(c) 29,314	29,314 Gravel.	.....	Aux. construction..	Chagres River gravel beds.....	*Marmot.*
(c) 7,900	7,900	.....	Aux. construction..	Chagres River gravel beds.....	*Marmot.*
533,214	259,114	274,100			

* This dredge rehandled 7,200 cubic yards of earth and 12,800 cubic yards of rock to relay at station 1845, for which no credit is given above.

(a) Gaillard Cut. (b) Balboa inner harbor. (c) Chagres River.

The excavated material was dumped as follows:

	Cubic yards.
Gatun Lake, north of Gamboa	348,450
Canal north of Gold Hill	7,200
Rio Grande valley	50,000
Canal south of Cucaracha slide	350
San Juan dump	90,000
Gamboa gravel plant	37,214
Total	533,214

The following excavation remained to be done on August 1:

Location.	Earth.	Rock.	Total.
	Cu. yds.	*Cu. yds.*	*Cu. yds.*
Gaillard Cut	.....	25,000	25,000
Pacific entrance	47,500	82,900	130,400
Total Canal prism	47,500	107,900	155,400
Cristobal coaling station	.....	2,100	2,100
Balboa inner harbor	104,850	13,400	118,250
Total, ocean to ocean	152,350	123,400	275,750

MUNICIPAL ENGINEERING DIVISION.

This division had the construction work itemized below in progress during July, with the completion on August 1 as shown:

Northern District.

	Per cent completed.
Municipal work, New Cristobal townsite:	
Grading	22
Roads	97½
Water lines	72
Sidewalks	86
Sanitary sewers	*75
Grading, fill, and general municipal work, new Silver townsite, Mount Hope:	
Water lines	99
Streets and roads	*99
Sewers, sanitary	*95
Sewers, storm	*98
Sidewalks	(†)
Road to new incinerator, Mount Hope	45
Roads for west half, Colon stables	99
Installation of water and sewer system, new Panama Railroad station, Gatun	*99
Construction of sidewalks on Lighthouse and Telephone Row, Gatun	*30
Well drilling at Chagres village	100
Municipal work, block No. 53, Colon:	
Roads	15
Tracks	2
Water lines	80
Sanitary sewers	90
Storm drains	75
Installation of sewer in area between 9th and 10th streets, Colon	95

*No work done during the month. † Not started.

Southern District.	Per cent completed.
Municipal work for 4 type-14 houses, Quarry Heights	15
New road, Balboa to Diablo Hill	*99
Municipal work, Catholic Community building, Balboa	25
Sewer and water lines for Central and South American Telegraph Company, Balboa	*95
Storm sewer, Javillo Fill	*99
Sewer, Northern avenue to beach	*99.1
Box sewer, Panama Railroad yards	95
Demolition of Calidonia bridge	92
Concreting Panama Tramway tracks, Calidonia crossing	*75
Concreting streets, new Santo Tomas Hospital	56

*No work done during the month.

The total output of all pumping stations for July was 774,598,950 gallons; and that of the 3 filtration plants, 471,023,000 gallons. The consumption in Panama City was 86,491,000 gallons; and that for Colon, 52,230,500 gallons. Sales of water to 294 vessels at Cristobal and Balboa totaled 12,814,322 gallons. There were 2,640 tons of garbage and 35 dead animals consumed at the Gavilan Island incinerator during July.

WORKING FORCE.

(Effective July 20, 1920.)

Department or Division.	Gold.	Silver.	Total.
Operation and Maintenance:			
Office	38	40	78
Building Division	484	1,331	1,815
Electrical Division	241	272	513
Municipal Engineering	112	1,202	1,314
Lock Operation	169	589	758
Dredging Division	187	1,137	1,324
Mechanical Division	1,019	1,714	2,733
Marine Division	177	437	614
Fortifications	60	243	303
Total	2,487	6,965	9,452
Supply Department:			
Quartermaster	219	1,813	2,032
Subsistence	37	401	438
Commissary	318	1,649	1,967
Cattle Industry—Plantations	27	515	542
Hotel Washington	11	100	111
Total	612	4,478	5,090
Accounting	257	9	266
Health Department	250	867	1,117
Executive Department	549	229	778
Total	1,056	1,105	2,161
Panama Railroad:			
Superintendent	79	582	661
Transportation	147	186	333
Receiving and Forwarding Agency	99	1,188	1,287
Coaling Stations	120	1,110	1,230
Total	445	3,066	3,511
Grand total	4,600	15,614	20,214

OCCUPATION OF QUARTERS.

Occupants of Panama Canal and Panama Railroad quarters on July 31, 1920, were classified as follows:

	Men.	Women.	Children.	Total.
Americans	3,615	2,098	2,528	8,241
Europeans	141	29	54	224
West Indians	4,901	1,915	3,821	10,637
Total	8,657	4,042	6,403	19,102

PUBLIC HEALTH.

One hundred and twenty cases of malaria with no deaths were reported for July, as compared with 204 cases with 2 deaths in June. There were 37 cases of influenza and 2 deaths. Pneumonia caused 21 deaths. Fourteen cases of chickenpox were reported, as compared with 18 the preceding month. There were 2 cases of smallpox, 1 in Panama and 1 nonresident. One case of leprosy, nonresident, was admitted to Palo Seco. Two cases of typhoid fever were reported, both nonresident, and 1 death.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The total value of the material ordered on United States requisitions and received on the Isthmus during July was $745,691.47. Of these receipts $665,453.81 was chargeable to operation and maintenance, $44,986.77 to construction and equipment, and $35,250.89 to miscellaneous departments. The total cash sales on the Isthmus from storehouses and obsolete store amounted to $198,466.66, of which $193,495.74 was for stock material, including $134,342.81 for fuel oil; $1,952.09 for scrap material; and $3,018.83 for obsolete second-hand material.

Sales to steamships from storehouses for July amounted to $149,926.69, of which $30,554.03 was for miscellaneous stock items and $119,372.66 for fuel oil. Total sales of commissary supplies to all purchasers for July amounted to $1,125,700.74, made up as follows: To steamships other than United States Government vessels and those of the Panama Railroad Steamship Line, $117,431.89; to The Panama Canal, $145,276.01; to the United States Government, including the Army and Navy, $150,221.22; to individuals and companies, mainly through charge accounts in the retail commissaries, $31,114.63; to the Panama Railroad including its steamships and the Hotel Washington, $34,041.38; and to individuals purchasing coupons, $647,615.61.

FINANCIAL RECEIPTS AND EXPENDITURES.

The cash balance in Canal appropriations on July 31, exclusive of Fortifications, was $21,002,246.87. The balance in fortification funds allotted to The Panama Canal was $1,421,037.40; and in fortification funds not allotted to The Panama Canal, $3,062,332.78. Payments from appropriations made by the Disbursing Clerk, Washington, amounted to $828,359.28, and by the Paymaster on the Isthmus to $1,736,542.66. Purchases of commissary books from the Panama Railroad Company amounted to $384,621.40.

Collections of tolls on the Isthmus totaled $836,298.68. Deposits of $75,300 were made with the Assistant Treasurer of the United States to be applied in payment of tolls and other charges against vessels using the Canal. The total Panama Canal collections on the Isthmus were $2,461,661.48, and collections by the Disbursing Clerk, Washington, $12,321.73. Receipts from Canal Zone and miscellaneous funds were $176,096.45; disbursements from the same source were $243,517.78. July payrolls on the Isthmus aggregated $1,363,618.63, as compared with $1,355,500.02 for June, an increase of $8,118.61 for this month.

Respectfully,

CHESTER HARDING, *Governor.*

The Fuel Situation.

THE PANAMA CANAL, MARINE DIVISION,
BALBOA HEIGHTS, C. Z., August 26, 1920.

To all steamship agents—The following additional cablegrams bearing on the fuel situation have been received since my circular of the 20th instant was issued:

August 20—From Governor of Porto Rico advising that stock of bunker coal at San Juan is 2,500 tons only.

August 20—From our Washington office, advising that Shipping Board states its stocks of fuel oil at Honolulu, St. Thomas, and west coast of South America are for Shipping Board vessels only; that oil situation throughout the world, coupled with lack of transportation, makes it impossible for Shipping Board to determine sufficiently in advance what stocks will be available at various stations; and that, for this reason, Shipping Board feels that to supply Isthmus with information relative Azores and Mediterranean ports would be misleading and have tendency to encourage ships other than Shipping Board ships to endeavor to obtain bunkers at these stations when Shipping Board is in no position to supply them.

August 25—From United British Refineries, Port of Spain, Trinidad, advising that fuel oil for bunkering is available for vessels calling; that current price is $30 for 2,240 pounds; and that vessels should be requested to cable, stating quantity required and date.

E. P. JESSOP, *Marine Superintendent.*

THE PANAMA CANAL, MARINE DIVISION,
BALBOA HEIGHTS, C. Z., August 28, 1920.

To all steamship agents—Recent restrictions with regard to bunkering ships with fuel oil are amended to permit oil companies having contracts with steamship companies to bunker their vessels without restriction from The Panama Canal.

It must be appreciated, however, that if the demand for oil becomes too great for the supply on hand, the former restrictions will again be put in force; and it is suggested that steamship agents assure themselves that their vessels bunker full at their regular bunkering ports, as required by my original circular letter. This is necessary if vessels are not to be again placed under the hardship of being diverted off their regular routes for bunkers.

E. P. JESSOP, *Marine Superintendent.*

Inspection of "Koyo Maru" at Balboa Dry Dock.

Repairs to the forward hull of the steamship *Koyo Maru*, which was grounded on the reef at Serrana Bank, are underway at the 1,000-foot dry dock. Inspection shows that shell frames for approximately 80 feet from bow on each side are badly damaged; most of the frames require splicing, being too badly bent and twisted to allow straightening; about 75 per cent of the shell plates for 5 strakes will require renewal, the balance being in such a condition that they can be reused. As cargo in No. 1 hold could not be worked due to this hold being flooded, it is being removed while the ship is in dry dock; due to this fact the entire damage can not be seen at this time; it seems probable that the tank tops will require repairs.

North Atlantic and Western Line in Coastwise Service.

The North Atlantic and Western Steamship Company, formerly operating as the New England Maritime Corporation, is conducting a line of cargo vessels in the United States coastwise trade, with sailings approximately monthly in each direction. The latest ship of this line to make the transit is the steamship *Springfield*, which passed through the Canal on August 24, bound from Boston to Seattle, by way of Los Angeles and San Francisco, carrying 4,450 tons of general cargo.

"West Kasson" Completing Around-the-World Voyage.

The steamship *West Kasson* is due shortly at Cristobal, returning to San Francisco in the completion of the first voyage in the company's around-the-world service. She arrived in New York from Boston on August 11, having reached Boston on August 5 from Bilbao, after calls at a number of Far Eastern and Mediterranean ports. From New York her schedule is to Baltimore, thence to Cristobal. The *West Kasson* sailed from San Francisco on March 12, and to the time of reaching New York had traveled 26,000 miles.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended August 28.

Steamship *Adria*, boiler and engine repairs; *Koyo Maru*, repairs to hull, forward, where grounded; tug *Gatun*, damaged bow rebuilt and extensive boiler repairs; submarines *R–23* and *R–26*, in for periodic overhaul, work completed; submarines *R–22*, in for periodic overhaul; steamship *Coalinga*, was docked, bottom cleaned and painted, miscellaneous repairs to boilers and machinery performed; dredge *Culebra*, has been practically re-conditioned; steamships *Marne*, rebuilding; *Lake Gormania*, minor repairs; tender *Perico*, boiler repairs; steamship *Caddo*, dock, paint, and clean bottom and periodic repairs to machinery and cargo pumps and pipes; dredge *No. 83*, general repairs hull and machinery; U. S. Eagle boat *No. 14*, turbine and reduction gears, completed; barges *Nos. 133* and *141*, general repairs; submarine *R–22*, periodic repairs; steamships *Calera*, repairs to reverse ram, completed; *Argus*, main engine repairs, completed; U. S. S. *Parrott*, bearing repairs.

The following vessels were at the Cristobal shops for repairs during the week ended August 30.

Steamships *Achilles*, *Allianca*, *Panama*, miscellaneous repairs and painting to engine, deck, and steward departments; *Walter Hardcastle*, patch furnace and boiler front; *Chile*, repair boilers, reversing engine, and pump; hulk *Arica*, dock, clean, and patch hull; steamships *Heredia*, *Calamares*, *Caribbean*, *Jamaica*, *Acajutla*, *Metapan*, U. S. M. P. *Graham*, U. S. S. *Owl*, U. S. S. *Kingfisher*, U. S. S. *Lap Wing*, *Ucayali*, *Orca*, *Rosana*, *Minnequa*, minor repairs.

Distribution of Cargo Passing Through the Canal from the Pacific to the Atlantic, July, 1920.

From—	North America. United States. North Atlantic ports.	Gulf ports.	Total, United States.	Atlantic terminus (Cristobal).	West Indies.	Total, North America.	Europe. British Isles.	Denmark.	France.
South America:									
Chile	20,385	.....	20,385	906	3,000	24,291	14,968	.....	.....
Colombia	.....	.....	.....	1,459	.....	1,459	.....	.....	.....
Ecuador	2,583	.....	2,583	3,521	.....	6,104	.....	.....	.....
Peru	6,584	.....	6,584	4,942	.....	11,526	3,697	.....	.....
*W. coast, S. America	266	.....	266	182	.....	448	.....	.....	.....
Total, S. America	29,818	.....	29,818	11,010	3,000	43,828	18,665	.....	.....
North America:									
Pacific Coast, U. S.	33,962	.....	33,962	2,374	7,976	44,312	85,735	.....	7,265
Canadian Pacific ports	.....	.....	.....	.....	.....	.....	8,189	.....	.....
Central America	141	.....	141	1,730	.....	1,871	214	205	3,180
Total, N. America	34,103	.....	34,103	4,104	7,976	46,183	94,138	205	10,445
Asia:									
China	32,048	51	32,099	.....	5,000	37,099	.....	6,181	.....
Japan	18,155	9,625	27,780	.....	622	28,402	.....	21,112	.....
Indo China and Malay Peninsula	9,383	.....	9,383	.....	21,212	30,595	.....	.....	.....
Philippines and E. Indies	17,562	.....	17,562	.....	3,000	20,562	.....	.....	.....
Other Asiatic ports	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, Asia	77,148	9,676	86,824	.....	29,834	116,658	.....	27,293	.....
Australasia:									
Australia	†9,532	.....	9,532	.....	.....	9,532	14,501	.....	.....
New Zealand	4,336	.....	4,336	.....	.....	4,336	43,690	.....	.....
Total, Australasia	13,868	.....	13,868	.....	.....	13,868	58,191	.....	.....
Grand totals	154,937	9,676	164,613	15,114	40,810	220,537	170,994	27,498	10,445
Per cent of total cargo	31.7	2.0	33.7	3.1	8.4	45.2	35.0	5.6	2.1

From—	Europe—Continued. Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Other European.‡	Total European.	Africa.	East coast, South America.	Grand total.	Per cent of total cargo.
South America—Con:											
Chile	6,008	8,000	5,257	....	.....	4,500	38,733	.....	.....	63,024	12.9
Colombia	.....	.....	.....	....	.....	.....	.....	.....	688	2,147	0.4
Ecuador	....	.....	599	....	.....	.....	599	.....	.....	6,703	1.4
Peru	.....	.....	17	....	.....	.....	3,714	.....	.....	15,240	3.1
*W. coast, S. Amer.	.....	.....	.....	....	2,115	.....	2,115	.....	.....	2,563	0.5
Total, S. America	6,008	8,000	5,873	....	2,115	4,500	45,161	.....	688	89,677	18.4
North America:											
Pacific Coast, U. S.	.....	.....	.....	....	7,430	.....	100,430	22,124	.....	166,866	34.2
Canadian Pacific pts	.....	.....	.....	....	.....	.....	8,189	.....	.....	8,189	1.7
Central America	.....	80	.....	7	.....	780	4,466	.....	.....	6,337	1.3
Total, N. America	.....	80	.....	7	7,430	780	113,085	22,124	.....	181,392	37.1
Asia:											
China	.....	.....	.....	....	.....	.....	6,181	.....	.....	43,280	8.9
Japan	.....	.....	.....	....	.....	.....	21,112	.....	.....	49,514	10.1
Indo China and Malay Peninsula	.....	.....	.....	....	.....	.....	.....	.....	.....	30,595	6.3
Philippines and E. Indies	.....	.....	.....	....	.....	.....	.....	.....	.....	20,562	4.2
Other Asiatic ports	.....	.....	1,418	....	.....	.....	1,418	.....	.....	1,418	0.3
Total, Asia	.....	.....	1,418	....	.....	.....	28,711	.....	.....	145,369	29.8

*General cargo, not specifically routed. †Includes 7,828 tons of cargo from New Caledonia.
‡Includes cargo not definitely routed.

Distribution of Cargo Passing Through the Canal from the Pacific to the Atlantic, July, 1920.
Continued.

From—	Europe—Continued.							Africa.	East coast, South America.	Grand total.	Per cent of total cargo.
	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Other European*	Total European.				
Australasia:											
Australia	.....	.....	.....	....	.....	.....	14,501	.....	.....	24,033	4.9
New Zealand	.....	.....	.....	....	.....	.....	43,690	.....	.....	48,026	9.8
Total, Australasia	.....	.....	.....	....	.....	.....	58,191	.....	.....	72,059	14.7
Grand totals	6,008	8,080	7,291	7	9,545	5,280	245,148	22,124	688	488,497	100.0
Per cent of total cargo	1.2	1.7	1.5	....	2.0	1.1	50.2	4.5	0.1	100.0	.....

*Includes cargo not definitely routed.

Distribution of Cargo Passing Through the Canal from the Atlantic to the Pacific, July, 1920.

From—	South America.						
	Chile.	Colombia.	Ecuador.	Peru	East coast, South America.	West coast, South America.	Total, South America.
North America:							
United States—							
North Atlantic ports	13,544	.....	.....	3,746	.....	8,187	25,477
South Atlantic ports	38,301	.....	.....	.....	.....	.....	38,301
Gulf ports	2,620	.....	302	.....	.....	2,532	5,454
Total, United States	54,465	.....	302	3,746	.....	10,719	69,232
Atlantic terminus, Panama Canal (Cristobal)	7,084	2,374	2,687	.....	.....	.....	12,145
Mexico, Gulf ports	48,845	.....	.....	.....	.....	.....	48,845
West Indies	.....	.....	.....	.....	.....	.....	.....
Central America	.....	.....	.....	.....	.....	.....	.....
Total, North America	110,394	2,374	2,989	3,746	.....	10,719	130,222
Europe:							
British Isles	2,092	.....	.....	.....	.....	4,107	6,179
France	1,048	.....	.....	.....	.....	.....	1,048
Germany	232	.....	100	.....	.....	990	1,322
Holland	240	.....	.....	.....	.....	590	830
Italy	391	.....	.....	.....	.....	.....	391
Scandinavian ports	6,237	.....	.....	.....	583	.....	6,820
*Other European ports	.....	.....	.....	.....	.....	410	410
Total, Europe	10,220	.....	100	.....	583	6,097	17,000
East coast, South America	1,795	.....	20	.....	.....	.....	1,815
Grand total	122,409	2,374	3,109	3,746	583	16,816	149,037
Per cent of total cargo	30.7	0.6	0.8	0.9	0.1	4.2	37.4

From—	North America.					Australasia.		
	Pacific Coast, United States.	Canadian Pacific ports.	West coast, Central America.	Pacific terminus, Panama Canal (Balboa).	Total, North America.	Australia.	New Zealand.	Total.
North America—Continued:								
United States—Continued—								
North Atlantic ports	13,741	6,232	1,450	.....	21,423	11,556	18,373	†32,855
South Atlantic ports	.....	.....	.....	12,264	12,264	3,867	661	4,528
Gulf ports	.....	.....	800	.....	800	.....	.....	.....
Total, United States	13,741	6,232	2,250	12,264	34,487	15,423	19,034	†37,383

* Includes cargo not specifically routed.
† Includes 2,926 tons of cargo, not specifically routed.

Distribution of Cargo Passing Through the Canal from the Atlantic to the Pacific, July, 1920.
Continued.

From—	North America—Continued.					Australasia—Continued.		
	Pacific Coast, United States.	Canadian Pacific ports.	West coast, Central America.	Pacific terminus, Panama Canal (Balboa).	Total, North America.	Australia.	New Zealand.	Total.
North America—Continued:								
Atlantic terminus, Panama Canal (Cristobal)	2,064	.....	1,876	.....	3,940	.....	.....	.....
Mexico, Gulf ports	10,746	.....	4,478	7,500	22,724	.....	.....	.....
West Indies	.....	9,400	.....	.....	9,400	.....	.....	.....
Central America	.....	.....	1,022	.....	1,022	.....	.....	.....
Total, North America	26,551	15,632	9,626	19,764	71,573	15,423	19,034	†37,383
Europe:								
British Isles	10,750	.....	.....	.....	10,750	.....	35,133	35,133
France	.....	342	.....	.....	342	.....	.....	.....
Germany	.....	.....	.....	.....	.....	.....	.....	.....
Holland	.....	.....	.....	.....	.....	.....	.....	.....
Italy	58	.....	.....	.....	58	.....	.....	.....
Scandinavian ports	2,000	.....	.....	.....	2,000	.....	.....	.....
*Other European ports	.....	.....	.....	.....	.....	.....	.....	.....
Total, Europe	12,808	342	.....	.....	13,150	.....	35,133	35,133
East coast, South America	.....	.....	.....	.....	.....	.....	.....	.....
Grand total	39,359	15,974	9,626	19,764	84,723	15,423	54,167	†72,516
Per cent of total cargo	9.9	4.0	2.4	4.9	21.3	3.9	13.6	18.2

From—	Asia.				Grand total.	Per cent of total cargo.
	China.	Japan.	Philippines and East Indies.	Total, Asia.		
North America:						
United States—						
North Atlantic ports	33,113	32,661	6,712	72,486	152,241	38.2
South Atlantic ports	5,400	.....	.....	5,400	60,493	15.2
Gulf ports	273	13,882	.....	14,155	20,409	5.1
Total, United States	38,786	46,543	6,712	92,041	233,143	58.5
Atlantic terminus, Panama Canal (Cristobal)	.....	.....	.....	.....	16,035	4.0
Mexico, Gulf ports	.....	.....	.....	.....	71,569	18.0
West Indies	.....	.....	.....	.....	9,400	2.3
Central America	.....	.....	.....	.....	1,022	0.3
Total, North America	38,786	46,543	6,712	92,041	331,219	83.1
Europe:						
British Isles	.....	.....	.....	.....	52,062	13.1
France	.....	.....	.....	.....	1,390	0.4
Germany	.....	.....	.....	.....	1,322	0.3
Holland	.....	.....	.....	.....	830	0.2
Italy	.....	.....	.....	.....	449	0.1
Scandinavian ports	.....	.....	.....	.....	8,820	2.2
*Other European ports	.....	.....	.....	.....	410	0.1
Total, Europe	.....	.....	.....	.....	65,283	16.4
East coast, South America	.....	.....	.....	.....	1,815	0.5
Grand total	38,786	46,543	6,712	92,041	398,317	100.0
Per cent of total cargo	9.7	11.7	1.7	23.1	100.0	.....

* Includes cargo not specifically routed.
† Includes 2,926 tons of cargo, not specifically routed.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight August 28, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship	Arrived at port		Entered Canal		Completed transit		Cleared for sea		Nationality	Line	Length	Beam	Salt water draft	From—	For—	Cargo	Tons	Panama Canal tonnage	
	Day	Hour	Day	Hour	Day	Hour	Day	Hour										Gross	Net
Athenic	21	21.20	22	10.10	22	17.47	22	18.57	British	White Star Line	500.3	63.3	29.1	London	Wellington	General	5,689	12,877	9,587
Kasuga (a)	22	16.05	23	6.00	23	13.34	26	14.10	Japanese	Japanese Government	366.0	59.0	26.0	New Orleans	San Francisco				
Almelo	21	9.31	23	7.22	23	14.46	24	14.10	Dutch	Royal Netherlands S. S. Line	460.0	63.0	19.0	Amsterdam	Corral	General	3,306	9,403	6,653
Tsuyama Maru	22	20.12	23	7.45	23	15.40	23	16.55	Japanese	Nippon Yusen Kabushiki Kaisha	445.0	58.0	26.3	New York	Manila	Steel, machinery	8,221	6,993	5,425
Maria S. (b)	23	6.30	23	7.50	23	9.38			Panaman	N. Salazar				Cristobal	Gatun Lake	Ballast		3	3
Trewellard	23	6.37	23	8.30	23	16.57	23	18.15	British	Edward Hain & Sons	370.0	51.6	23.6	Avonmouth	Melbourne	General	5,848	5,356	4,204
Lake Granby	22	8.11	23	8.50	23	17.50	23	18.52	American	Warren Transportation Co. (S.B)	251.0	43.0	23.6	Baltimore	San Antonio	Coke	2,516	2,772	1,767
Sciota (c)	7-27	18.22	23	10.24	23	16.44	26	7.20	American	United States Navy				Coco Solo	Balboa	Ballast			
St. Finbarr (c)	20	7.26	23	10.52	23	17.45	25	9.55	British	British Admiralty	146.0	29.0	14.0	London	Arica	Ballast		449	109
Morris No. 271 (d)	21	9.23	23	11.35	23	17.50	26	17.50	American	United States Navy	314.0	33.0	12.0	Hampton R'ds	San Diego	Ballast			
Parrott No. 218 (d)	21	9.15	23	11.35	23	17.41	26	17.50	American	United States Navy	314.0	30.0	12.0	Philadelphia	San Diego	Ballast			
Springfield	20	16.05	24	6.55	24	14.10	24	15.12	American	Atlantic & Western Co. (S. B.)	410.5	54.2	19.3	Boston	Seattle	General	4 450	6,576	4,971
Port Napier	18	6.22	24	7.10	24	15.06	24	23.54	British	Commonwealth and Dom. Line	490.0	61.0	29.0	London	Sydney	General	10,882	10,987	8,165
Muncaster Castle	23	21.42	24	7.25	24	18.24	24	19 32	British	Lancashire Shipping Co	412.0	50.0	25.6	New York	Kobe	General	6,776	5,739	4,364
Liberty	24	10.53	24	11.18	24	19.15	25	8.29	American	U. S A. Inc. (S. B.)	395.5	55.0	26.0	New York	Auckland	General, case oil	6,600	7,280	5,219
Mincola	24	16.22	25	6.17	25	13.10	25	14.46	American	W. R. Grace & Co	298.6	41.0	19.1	Baltimore	Samanco	General	1,959	2,835	1,822
Minnie de Larrinaga	24	15.05	25	6.37	25	13.52	25	14.46	British	Larrinaga Steamship Co	420.0	54.0	14.3	Baltimore	Astoria	Ballast		6,421	4,904
Lucerie	24	10.34	25	6.55	25	14.54	25	20.03	British	Andrew Weir & Co	412.5	55.5	17.0	New York	Caleta Colosa	Ballast		6,895	4,863
La Habra	24	23.35	25	7.33	25	15.56	25	16.55	Norwegian	W. Wilhelmsen	424.8	57.0	27.6	Puerto Lobos	Antofagasta	Crude oil	9,200	7,053	5,093
Waterbury	24	16.28	25	11.10	25	18.03	25	22.58	American	Williams Dimond & Co. (S. B.)	400.7	54.2	19.4	New York	Portland	General	4,000	6,529	4,737
Mantaro	20	16.57	25	16.00	26	12.46	26	15.47	Peruvian	Peruvian Line	367.0	46.0	20.0	Cristobal	Callao	General	1,090	4,838	2,959
Astral	25	13.12	26	6.25	26	13.57	26	15.07	American	Standard Oil Co	439.5	58.0	29.0	Sabine	Woosung	Petroleum	10,046		6,319
Tokufuku Maru	25	21.22	26	6.52	26	14.07	26	15.07	Japanese	Kokusai Kisen Kabushiki Kaisha	385.0	51.0	26.0	Port Arthur	Manila	Oil, grease, etc	7,367	5,956	4,471
Talaralite	26	6.30	26	8.35	26	16.48	26	16.58	British	International Petroleum Co	250.0	43.0	21.6	Tampico	Talara	Fuel oil	3,000	2,631	1,718
Jaunty	21	19.12	26	10.00	26	16.38	26	17.25	British	British Admiralty	155.0	31.1	15.0	Bermuda	Callao	Ballast		684	209
Frederick Luckenbach	26	9.01	26	11.30	26	18.49	26	20.04	American	Luckenbach Steamship Co	317.5	40.2	21.8	New York	San Francisco	General	3,000	2,986	2,091
Cyrus W. Fields (c)			25	8.20	25	15.40	27	10.26	American	United States Army				Cristobal	Balboa	Ballast			
Lake Fanbush	26	20.52	27	6.20	27	13.25	27	15.35	American	N. O. & S. A. S. S. Co. (S. B.)	251.0	43.6	18.1	New Orleans	Valparaiso	General	1,478	2,861	1,812
Kaikoura	26	14.40	27	6.20	27	14.15	27	15.17	British	New Zealand Shipping Co	460.0	58.0	28.0	London	Auckland	General	6,242	9,194	6,602
Tanneberg	27	6.07	27	8.57	27	15.33	28	10.22	British	Philips & Philips	483.0	63.0	19.6	Cardiff	Portland	Ballast		9,273	6,525

(a) Cruiser (b) Launch. (c) Tug (d) Destroyer

Tern (*e*)	23	14.30	27	11.20	27	18.17	27	19.30	American	United States Navy	187.0	36.0	12.5	Cristobal	San Diego					
Jamaica	23	15.57	28	6.11	28	12.57	28	15.45	British	Pacific Steam Navigation Co	220.0	34.0	13.6	Cristobal	Buenaventura	General	874	1,187	622
Kaysseka	27	20.58	28	6.30	28	13.41	28	16.35	American	Thorndyke & Tremholm (S. B.)	400.7	54.2	25.0	Norfolk	San Diego	Coal	7,665	6,529	4,712
West Katan	28	5.40	28	7.18	28	14.40	28	21.40	American	William Dimond & Co (S. B.)	410.5	54.3	22.3	Liverpool	Tacoma	General	6,004	6,573	4,901
Indiana Harbor	28	8.09	28	9.32	28	16.21	29	7.16	American	Ind. Navigation Co	251.0	43.6	21.0	Pensacola	Valparaiso	Coke	2,549	2,857	1,784
George Washington (*f*)	28	10.26	28	11.00	28	17.58	28	21.40	Norwegian	Peter Olsen	425.0	55.0	27.6	Antwerp	San Francisco	Silver sand	9,000	7,440	5,627
Orca	26	6.25	28	11.18	28	18.48	28	20.12	British	Pacific Steam Navigation Co	575.0	67.6	30.2	Liverpool	Coronel	General	10,312	15,931	10,486

(*e*) U. S. tug and barges 297 and 308. (*f*) Motor ship.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Michigan (*g*)	21	14.30	22	6.54	22	14.40	24	13.35	American	United States Navy	450.0	76.0	27.0	San Pedro	Annapolis					
South Carolina (*g*)	21	14.30	22	7.01	22	15.05	24	13.38	American	United States Navy	452.9	80.6	27.0	San Pedro	Annapolis					
Tern (*e*)	21	14.30	22	7.13	22	14.30	27	11.20	American	United States Navy	187.5	35.5		High seas	Cristobal					
Orcus	21	22.00	22	8.16	22	16.05	22	22.25	American	Weasel Duval & Co (S. B.)	380.2	53.1	24.0	Antofagasta	Savannah	Nitrates	6,089	5,667	4,220	
New Hampshire (*g*)	21	14.30	23	6.10	23	14.40	24	13.38	American	United States Navy	456.0	76.1	27.0	San Pedro	Annapolis					
Kansas (*g*)	21	14.30	23	6.17	23	15.45	24	13.35	American	United States Navy	456.0	76.1	27.0	San Pedro	Annapolis					
Jamaica	22	15.00	23	6.47	23	15.57	28	6.11	British	Pacific Steam Navigation Co	220.0	34.0	13.0	Buenaventura	Cristobal	General	642	1,187	622	
Faraday (*h*)	22	13.00	23	7.43	23	16.55	24	18.05	British	Siemens Bros. & Co	360.4	52.3	21.0	Callao	London	Ballast		5,510		
Eagle No. 4 (*i*)	21	14.00	23	8.34	23	15.22			American	United States Navy	200.0	25.0		High seas	Cristobal					
Silver Shell	22	23.10	23	8.47	23	17.35	23	17.35	American	Shell Oil Co. of California	411.6	53.4	25.6	San Francisco	St. Catherine	Lubricating oil	7,367	6,108	4,291	
Chile	22	19.15	23	10.08	23	19.07			British	Pacific Steam Navigation Co	350.3	43.1	17.3	Valparaiso	Cristobal	General	747	4,065	2,668	
Acajutla	23	4.45	23	12.46	23	19.20	30	11.00	British	Pacific Steam Navigation Co	215.7	33.5	15.4	Champerico	Cristobal	(*m*)	577	1,273	706	
Connecticut (*g*)	21	14.30	24	6.35	24	15.05	24	15.06	American	United States Navy	456.0	76.1	27.0	San Pedro	Annapolis					
Minnesota (*g*)	21	14.30	24	6.41	24	14.05	24	14.05	American	United States Navy	456.0	76.1	27.0	San Pedro	Annapolis					
Arawa	23	14.30	24	6.51	24	15.45	24	21.25	British	Shaw, Saville & Albion Co	460.0	60.0	29.0	Wellington	London	Frozen, general	9,800	10,035	7,504	
Papagoa	23	22.30	24	8.22	24	16.07	25	12.40	British	New Zealand Shipping Co	430.0	54.2	23.0	Lyttleton	London	Frozen, general	3,737	8,174	6,092	
Ucayali	24	3.30	24	9.41	24	17.40			Peruvian	Peruvian Line	374.7	46.3	21.6	Callao	Cristobal	(*n*)	2,305	4,466	2,405	
Potosi	24	7.50	24	9.47	24	18.25	24	22.30	British	Pacific Steam Navigation Co	381.4	49.0	23.6	Talcahuano	Liverpool	General	5,860	5,567	4,296	
Culgoa (*j*)	23	5.45	25	6.36	25	14.00	25	15.30	American	United States Navy	343.0	41.0	18.11	San Pedro	New York	Supplies	300	(*q*)	6,500	
Argus	21	20.40	25	6.54	25	15.10	25	17.37	American	Green Star Steamship Corp	401.2	53.2	26.0	Vancouver	Immingham	Railroad ties	7,882	7,082	5,167	
Canibas	25	6.45	25	8.45	25	16.40	26	12.52	American	Green Star Steamship Corp	420.5	54.2	25.0	Hongkong	Baltimore	Rice and iron ore	8,297	7,309	5,289	
Jugo Slaven Prvi	25	7.45	25	10.30	25	18.25	25	20.10	Jugoslav	Paul Metrovitch	326.0	40.0	23.1	Iquique	Hampton R'ds	Nitrates	4,300	3,286	2,254	
Lake Lesa	25	9.15	25	10.59	25	19.30	26	1.30	American	Hasler Brothers (S. B.)	251.0	43.7	21.0	Iquique	Savannah	Nitrates	3,212	2,505	1,622	
S. C. No. 285	21	12.03	25	13.07	25	18.58			American	United States Navy				Balboa	Cristobal					
Eastern Ocean	25	15.45	26	6.35	26	15.15	26	20.40	American	McCormick & McPherson (S.B.)	385.3	51.2	27.0	Portland	United King	Wheat	7,324	6,224	4,465	
Laura C. Hall (*k*)	26	5.00	26	7.15	26	15.22	30	7.35	British	Pacific Metals Corp	81.0	25.6	10.0	Buenaventura	Cristobal	(*o*)	68½	130	69	
Rosana (*k*)	25	9.45	27	6.20	27	14.43			Costa Rican	Alberto Fait	107.7	25.0	8.5	Puntarenas	Cristobal	Logs and sacks	158	265	185	
Crown of Toledo	26	14.30	27	6.32	27	14.30	27	14.30	British	Thomas and James Harrison	455.4	56.2	27.5	San Francisco	Liverpool	(*p*)	9,400	7,699	5,443	
Nika	26	19.30	27	8.53	27	17.00	27	20.50	American	Hodge Steamship Co	267.3	46.0	23.6	Mejillones	Cristobal (*l*)	Nitrates	2,800	2,586	1,747	
Wytheville	27	7.30	27	9.54	27	17.18	27	15.35	American	Barber Line (S. B.)	395.5	55.0	22.0	Shanghai	Boston	General	7,000	6,841	4,758	
Robin Goodfellow	27	20.45	28	6.57	28	14.50	28	15.45	American	Skinner & Eddy	424.8	55.2	26.1	Vancouver	Rio de Janeiro	Coal	7,648			
Renaico	27	12.30	28	11.09	28	18.03	28	21.08	Chilean	South American Steamship Line	412.0	50.3	26.0	Talcahuano	New York	General	3,533½	6,050	3,442	

(*g*) Battleship. (*h*) Cable ship. (*i*) Eagle boat. (*j*) Supply ship. (*k*) Motor schooner. (*l*) For orders. (*m*) Coffee, wool, hides, etc. (*n*) Copper, cotton, sugar, etc. (*o*) Coffee and box platinum. (*p*) Flour, wheat, barley, and fruit. (*q*) Displacement.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
Aug. 22	Toloa	United Fruit Co	Port Limon.	Aug. 22	Toloa	United Fruit Co	New York via Habana.
Aug. 22	Gen. G. W. Goethals	Panama Railroad Steamship Line	Colombian ports.	Aug. 22	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Aug. 22	Advance	Panama Railroad Steamship Line	New York via Haiti.	Aug. 22	Perou	French Line	Puerto Colombia.
Aug. 23	Calamares	United Fruit Co	New York via Habana.	Aug. 23	Colon	Panama Railroad Steamship Line	Colombian ports.
Aug. 23	Canoa Tulia	Diego Martinez	Colon.	Aug. 23	Canoa Tulia	Diego Martinez	Colon.
Aug. 24	Antonio Lopez	Spanish Line	Barcelona and wayports.	Aug. 24	Nessian	Leyland Line	Texas City.
Aug. 24	Achilles	Panama Railroad Steamship Line	Norfolk.	Aug. 24	Calamares	United Fruit Co	Port Limon.
Aug. 24	Heredia	United Fruit Co	New Orleans.	Aug. 25	Nemesis	Lindsay Swan Hunter	Kingston.
Aug. 24	Alliance	Panama Railroad Steamship Line	New York and Haiti.	Aug. 25	Gen. G. W. Goethals	Panama Railroad Steamship Line	New York via Haiti.
Aug. 25	Metapan	United Fruit Co	New Orleans via wayp'ts.	Aug. 25	Metapan	United Fruit Co	New Orleans.
Aug. 25	Nemesis	Lindsay Swan Hunter	Returned from high seas.	Aug. 26	Heredia	United Fruit Co	New Orleans and wayp'ts.
Aug. 26	Caribbean	Panama Railroad Cattle Industry	Cartagena.	Aug. 27	Antonio Lopez	Spanish Line	Puerto Colombia.
Aug. 27	San Pablo	United Fruit Co	Boston.	Aug. 27	Nemesis	Lindsay Swan Hunter	Kingston.
Aug. 27	Santa Leonora	United States Army	N. Orleans and San Juan.	Aug. 27	Achilles	Panama Railroad Steamship Line	Norfolk.
Aug. 28	Panama	Panama Railroad Steamship Line	New York via Haiti.	Aug. 27	San Pablo	United Fruit Co	Port Limon.
Aug. 28	Crescent (r)	H. A. Bodden	Colon.	Aug. 28	Advance	Panama Railroad Steamship Line	New York via Haiti.

(r) Schooner.

PORT OF BALBOA.

*ARRIVALS.				*DEPARTURES.			
Aug. 21	Tacoma (a)	United States Navy	Guayaquil.	Aug. 22	Seiyo Maru	Toyo Kisen Kaisha	Hongkong.
Aug. 26	Imperial	South American Steamship Line	Talcahuano.	Aug. 24	Eagle No. 14	United States Navy	Honolulu.
Aug. 28	Siskiyou	E. K. Wood Lumber Co	Callao.				

*Other than ships passing through the Canal.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

Hotel Tivoli Dinner Concert Season.

The Hotel Tivoli will open its dinner concert season on Sunday, September 5, and will present for the first time on the Isthmus, the Francis B. Ackerman Symphony Orchestra. The orchestra will render a program of popular concert music from 7.30 until 9 p. m.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending August 28, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Caribbean	Panama Railroad Cattle Industry		August 22		½
Perou	French Line		August 22		72
Junin	Pacific Steam Navigation Co		August 22		(†)
Toloa	United Fruit Co	August 22	August 22	84	15
Colon	Panama Railroad Steamship Line		August 23		173
Nessian	Leyland Line		August 24		141
Gen. G. W. Goethals	Panama Railroad Steamship Line	August 22	August 25	260	2,179
Mantaro	Peruvian Line		August 25		1,119
Advance	Panama Railroad Steamship Line	August 22	August 28	275½	529
Acajutla	Pacific Steam Navigation Co	August 23		577	
Chile	Pacific Steam Navigation Co	August 23		676	
Jamaica	Pacific Steam Navigation Co	August 23	August 28	646½	874
Calamares	United Fruit Co	August 23	August 24	542	½
Herrera	United Fruit Co	August 24	August 26	793	108
Achilles	Panama Railroad Steamship Line	August 24	August 27	12,016	(†)
Allianca	Panama Railroad Steamship Line	August 24		1,624	
Antonio Lopez	Spanish Line	August 24	August 27	4	136
Ucayali	Peruvian Line	August 24		2,305	
Caribbean	Panama Railroad Cattle Industry	August 26		350	
Orca	Pacific Steam Navigation Co	August 26	August 28	497	15
Laura C. Hall	Pacific Metals Corporation	August 26		68½	
San Pablo	United Fruit Co	August 27	August 27	25	(†)
Rosana	Alberto Fait	August 27		158	
*Santa Leonora	United States Army	August 27		1,141	
*Edgemore	United States Army	August 28		431	
Panama	Panama Railroad Steamship Line	August 28		2,675	

* United States Army transport. † No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending August 28, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Chile	Pacific Steam Navigation Co	August 22	August 23	30	
Jamaica	Pacific Steam Navigation Co	August 22	August 23	4	
Acajutla	Pacific Steam Navigation Co	August 23	August 23	53	
Imperial	South American S. S. Co (U. F. C.)	August 26		157	
Renaico	South American S. S. Co (U. F. C.)	August 27	August 28		129
Pomona	United States Shipping Board	August 28		101	
Jamaica	Pacific Steam Navigation Co	August 28	August 28		1

Electric Wiring in Quarters.

The Electrical Engineer requests the attention of all concerned to the provisions on this subject contained in the Governor's circular No. 676-11, issued May 1, 1917, as follows:

1. Occupants of Panama Canal quarters are forbidden to make any change or additions whatsoever in the electrical wiring in quarters. Such work will be done by the district wireman or other representative of the Electrical Division.

2. Occupants are also forbidden to use any electrical heating or power appliances without first notifying the district wireman of the Electrical Division, who will make an inspection of such equipment, after which it may be used as herein provided.

3. Portable table lamps purchased by employees may be plugged into existing drop cords or chandeliers without special permission, providing that the flexible cord connection shall not exceed 10 feet in length. Employees will be held responsible for the proper care in the use of such lamps in order that fixtures and fittings shall not be pulled out of line or damaged by undue strain on the extension cord, and will be required to pay for any repairs that may be necessitated by their use. In case the reading lamp is to be used in a location too remote from an existing outlet to be reached with the length of cord above specified, a special outlet will be necessary.

4. In case of violation of the provisions of paragraph 1 of this circular, the Electrical Engineer will immediately remove the unauthorized installation and restore the system to its original condition, and the party responsible for the violation will be charged with the cost of such work. In addition, the violation will be reported to this office for such disciplinary measures as may be deemed proper.

5. The following and similar work in gold quarters will be done only at the expense of the employee: Installation of additional lighting fixtures; installation of additional receptacles, outlets, rosettes, switches, or other fittings to accommodate any electrical device which is the property of the employee, including all heating appliances, motors, and dry lamps in pianos, phonographs, bookcases, etc.

Such installations will conform to the original type of installation in the quarters and will become a part of the house wiring, not to be removed; except that such part or parts of an installation which are installed in portable articles, such as pianos, bookcases, etc., the property of the employee, will become the employee's property and may be taken with him upon vacating the quarters.

6. All repairs to electrical equipment which is the property of an employee will be made only at his expense. This will include such work as the following: Repairs to or renewals of cords on flatirons, toasters, portable lamps, etc., including the renewal of caps and plugs, repairs to appliances proper, including cost of new elements and parts, except when same are furnished by the employee, fitting sockets, cords, switches, etc., to portable lamps and other equipment.

7. When any work as described herein is desired by an employee, he should call the district wireman in his district, stating what is desired, except in case of repairs to apparatus, which can be taken directly to the shop. In such cases the apparatus should be delivered to the shop and called for when completed. The labor charge will include the travel time of the wireman. The district wireman is authorized to proceed with the work on verbal authority from the employee. This does not include repairs to the house-lighting proper nor for lamp renewals, fuse renewals, or any other work properly chargeable to the house-lighting system.

8. Bills for repairs and installations made for the benefit of the employee occupying quarters will be written by the district wireman* on form A 443-1 in quadruplicate. The person making the bill must forward the original, duplicate, and triplicate copies promptly to the Collector of The Panama Canal, Balboa Heights, for collection, accompanied by a letter listing the bills forwarded, and copy of this letter must be sent to the Auditor. The quadruplicate copy of the bill will remain in the book and be retained by the issuing office. The bill should show the name, check number, and postal address of the employee or person responsible for the payment, and the house number in which the work was done. Itemized detail on the bill is not necessary. It will be sufficient to show the nature of the work done and the amount, as: "For repairs to 1 flatiron, $2.00." The employee will be charged actual cost of labor plus the Electrical Division overhead of 25 per cent; the actual cost of material and Panama Canal surcharge of 10 per cent on the total for all work chargeable to the employee.

Detailed instructions covering the rendering of these bills will be issued to the district wiremen concerned by the Electrical Engineer.

9. Employees not occupying Panama Canal quarters will be required to make a deposit with the Collector of The Panama Canal sufficient to cover the estimated cost of any work done by the Electrical Division, before the work is done.

10. Circular No. 676-6, dated August 4, 1915, and paragraphs 34 (b), (c), (d), and (e) of Circular No. 627-15, dated August 5, 1916, are revoked.

11. This circular will be effective at once.

CHESTER HARDING, *Governor.*

*This practice has been changed with respect to place of preparation of bills. Bills are prepared in the office of the Electrical Engineer on Form 5445-1, in quadruplicate, after which the procedure is as in Section 8, above.

Official Circulars.

Time Off for Recuperation.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 23, 1920.

To all concerned—In the case of an hourly employee who works overtime and desires time off for recuperation, such time may be allowed him at the discretion of the head of his department, and may be, at the option of the employee concerned, without pay or a charge against leave due.

CHESTER HARDING, *Governor.*

Quarters for Employees with Large Number of Children.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 27, 1920.

CIRCULAR NO. 627-27:

Paragraph No. 12 of Circular No. 627-24, is amended to read as follows:

"12. Applicants for transfer to quarters designated for use of families with large number of children will be given preference over other applicants for transfer, provided applicant has already received a regular assignment, or is at head of the list for assignment. Preference will be given to families with greatest number of children above two. Families with two children or less will be assigned according to service."

CHESTER HARDING, *Governor.*

Misdirected Letters.

BALBOA HEIGHTS, C. Z., August 30, 1920.

The following insufficiently addressed mail matter has been received in the office of the Director of Posts and may be obtained upon request of the addressees. Request for forwarding may be made by telephone, calling No. 182, Balboa:

Beatie, Mrs. Mary
*Beyzart, Sr. Mary
Brandenburg, Millard W.
Christien, Mr. Frank
Devane, Mr. Foy
Edwards, Margarite
Lance, Wm. Paul
Lavalay, Emanuel J. J.
Leokow, R.
Moxley, R.
McDonald, Miss Margaret
Pomare, Mr. Talmago
Poole, Mr. Herbert M.
Rodman, Mr. John
*Russell, Jas. G.
Sandoval, Mr. Onofre F.
*Sanford, C. G.
Specht, Mr. S. Orville
Zuik, Raymond

* Paper.

Sale of Marine Engine at Cristobal.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., September 10, 1920, and then opened, for the purchase of 1 engine, steam, vertical, marine type, 18-horsepower, on hand at Cristobal storehouse. Form of proposal may be had upon application. The Panama Canal reserves the right to reject any or all bids.

Sale of Unclaimed and Insufficiently Addressed Mail.

The Director of Posts, room 301, Administration Building, Balboa Heights, will accept written sealed bids up to the close of business September 15, 1920, for the purchase of the articles contained in unclaimed mail parcels originating in or addressed to post offices in the Canal Zone. An itemized list of the articles offered for sale will be found posted at the Canal Zone post offices, customs offices, clubhouses, and railroad stations, and prospective bidders desiring to examine the articles should apply to the above-mentioned office on any business day. Bids may be made for the entire lot of the articles to be sold, or be limited to individual articles, and should be submitted in sealed envelopes addressed to the Director of Posts, marked "Bid on unclaimed mail matter." No advance deposit of money is required. The right is reserved to reject any or all bids.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates, domestic, $1.00 per year; foreign, $1.50; address The Panama Canal Record, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

Entered as second-class matter, February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Volume XIV. Balboa Heights, C. Z., September 8, 1920. No. 4.

New High Record for Month's Business Through the Canal.

A new high record for a month's traffic through the Canal was established in August. Two hundred and sixty-six commercial ships made the transit, carrying 1,040,740 tons of cargo. Their aggregate net tonnage, on the basis of Panama Canal measurement, was 951,345 tons. The tolls collected amounted to $936,209.44.

The previous record month was December, 1919, when 260 ships, of 927,726 net tons, carried 924,479 tons of cargo and paid $891,375.70 in tolls.

The average number of commercial ships passing through the Canal per month during the current calendar year up to August was 221.57; including the August traffic, the average per month this year has been 227.375.

Details of the traffic in August are presented in the tabulation, "Canal Traffic in August," published below.

Canal Traffic in August.

The Canal traffic for August, 1920, is shown as classified in the following tabulation:

PACIFIC TO ATLANTIC.

No. ships.	Registry.	Registered gross tonnage.	Registered net tonnage.	Panama Canal net tonnage.	Tons cargo.	From—	To—
22	American...	81,141	51,721	59,680	98,795	W. coast S. America...	E. coast U. S.
2	British.....	12,241	7,495	9,122	8,176	W. coast S. America...	E. coast U. S.
1	Chilean.....	9,261	2,981	3,442	3,536	W. coast S. America...	E. coast U. S.
25	.....	102,643	62,197	72,244	110,507	W. coast S. America...	E. coast U. S.
9	British.....	12,478	6,928	9,496	5,142	W. coast S. America...	Cristobal.
4	American...	1,150	907	885	612	W. coast S. America...	Cristobal.
3	Peruvian...	12,666	6,614	8,315	8,090	W. coast S. America.....	Cristobal.
1	Chilean.....	3,798	2,272	3,182	271	W. coast S. America...	Cristobal.
17	.....	30,092	16,721	21,878	14,115	W. coast S. America...	Cristobal.
10	British.....	55,599	34,516	43,942	44,999	W. coast S. America...	Europe.
2	French.....	11,228	7,431	8,795	13,047	W. coast S. America...	Europe.
2	German....	7,654	4,619	6,938	7,987	W. coast S. America...	Europe.
1	Spanish.....	4,600	3,625	3,166	6,032	W. coast S. America...	Europe.
1	Jugoslav....	3,185	2,034	2,254	4,300	W. coast S. America...	Europe.
16	.....	82,266	52,225	65,095	76,365	W. coast S. America...	Europe.
7	American...	42,957	28,831	34,619	52,808	W. coast U. S.....	Europe.
2	British.....	13,215	8,427	10,035	17,398	W. coast U. S.....	Europe.
1	Swedish....	5,706	3,513	5,032	7,493	W. coast U. S.....	Europe.
10	.....	61,878	40,771	49,686	77,699	W. coast U. S.....	Europe.
8	British.....	62,938	40,324	54,904	49,806	Australia and N. Z'land	Europe.
1	American...	5,869	3,636	4,883	6,380	Australia and N. Z'land	Europe.
9	....	68,807	43,960	59,787	56,186	Australia and N. Z'land	Europe.
9	American...	51,663	32,197	43,244	30,818	U. S. coastwise.	
5	American...	34,588	23,937	27,677	Ballast...	W. coast S. America...	Mexico.
3	Norwegian..	20,970	13,278	15,282	Ballast...	W. coast S. America...	Mexico.
8	.....	5,558	37,215	42,959	Ballast...	W. coast S. America...	Mexico.

PACIFIC TO ATLANTIC—Continued.

No. ships.	Registry.	Registered gross tonnage.	Registered net tonnage.	Panama Canal net tonnage.	Tons cargo.	From—	To—
4	Japanese....	25,744	17,499	19,400	29,327	Far East.....	E. coast U. S.
3	American...	14,499	9,801	11,047	16,546	Far East.....	E. coast U. S.
1	British.....	4,329	2,798	3,991	6,154	Far East.....	E. coast U. S.
8	.....	44.572	30,098	34,438	52,027	Far East.....	E. coast U. S.
2	British.....	2,298	1,304	1,398	1,215	W. coast Cen. America	Cristobal.
2	Costa Rican	316	186	370	395	W. coast Cen. America.	Cristobal.
4	.....	2,614	1,490	1,768	1,610	W. coast Cen. America	Cristobal.
2	American...	12,289	7,565	10,050	15,300	Australia and N. Z'land	E. coast U. S.
1	British.....	6,975	5,299	5,296	3,766	Australia and N. Z'land	E. coast U. S.
3	.....	19,264	12,864	15.346	19,066	Australia and N. Z'land	E. coast U. S.
2	American...	14,623	9,052	10,424	Ballast...	W. coast U. S.....	Mexico.
2	American...	11,588	7,185	9,755	14,626	Philippines.....	E. coast U. S.
2	American ..	4,777	3,493	3,384	6,841	W. coast S. America...	Porto Rico.
1	American...	6,861	5,122	5,624	7,648	British Columbia.....	E. coast U. S.
1	British.....	6,697	4,077	5,309	9,550	W. coast S. America...	Egypt.
1	American...	6,324	4,672	5,141	7,100	W. coast U. S.....	Egypt.
1	American...	6,094	3,816	5,167	8,260	British Columbia.....	Europe.
1	American...	5,784	3,513	4,401	6,135	Philippines.....	Cuba.
1	American...	3,099	2,365	2,316	1,145	W. coast Cen. America.	Cuba.
1	American...	632	456	453	842	W. coast Cen. America.	E. coast U. S.
1	British.....	562	519	422	246	Tahiti.....	E. coast U. S.
123	.....	586,398	374,008	458,841	500,786		

ATLANTIC TO PACIFIC.

16	American...	58,365	36,959	44,161	40,376	E. coast U. S.....	W. coast S. America.
5	British.....	31,097	19,234	23,684	15,224	E. coast U. S.....	W. coast S. America.
4	Chilean.....	8,033	5,617	5,639	7,812	E. coast U. S.....	W. coast S. America.
1	Norwegian..	7,777	5,912	6,328	6,957	E. coast U. S.....	W. coast S. America.
1	Danish.....	3,766	2,302	3,558	5,632	E. coast U. S.....	W. coast S America.
1	Peruvian...	1,269	863	870	1,223	E. coast U. S.....	W. coast S. America.
28	.....	110,307	70,887	84,240	77,224	E. coast U. S.....	W. coast S. America.
9	American...	59,664	36,779	49,360	72,697	E. coast U. S.....	Far East.
8	Japanese....	43,837	29,048	33,383	47,150	E. coast U. S.....	Far East.
3	British.....	15,962	10,120	13,576	19,258	E. coast U. S.....	Far East.
1	Chinese.....	1,962	1,209	1,501	2,600	E. coast U. S.....	Far East.
21	.....	121,425	77,156	97,820	141,705	E. coast U. S.....	Far East.
8	British.....	8,629	4,613	6,049	4,727	Cristobal.....	W. coast S. America.
3	American...	953	710	688	531	Cristobal.....	W. coast S. America.
2	Chilean.....	7,612	4,560	6,250	1,504	Cristobal.....	W. coast S. America.
2	Peruvian...	9,361	5,100	5,910	1,930	Cristobal.....	W. coast S. America.
15	.....	26,555	14,983	18,897	8,692	Cristobal.....	W. coast S. America.
5	French.....	13,679	11,402	11,813	410	Europe.....	W. coast U. S.
4	British.....	26,515	16,832	21,101	4,532	Europe.....	W. coast U. S.
2	American...	12,963	8,862	10,118	14,605	Europe.....	W. coast U. S.
1	Norwegian..	7,093	4,479	5,627	9,000	Europe.....	W. coast U. S.
12	.....	60,250	41,575	48,659	28,547	Europe.	W. coast U. S.
9	British.....	37,311	21,554	25,868	18,746	Europe.....	W. coast S. America.
1	Dutch.....	6,899	4,417	6,653	3,373	Europe.....	W. coast S. America.
1	French.....	5,681	3,600	4,081	1,091	Europe.....	W. coast S. America.
1	Norwegian..	371	288	306	492	Europe.....	W. coast S. America.
12	.....	50,262	29,859	36,908	23,702	Europe.....	W. coast S. America.
5	American...	32,849	22,344	26,137	43,739	Mexico.....	W. coast S. America.
4	British.....	16,411	10,018	11,814	20,300	Mexico.....	W. coast S. America.
2	Norwegian..	14,009	8,860	10,174	18,600	Mexico.....	W. coast S. America.
11	.....	63,269	41,222	48,125	82,639	Mexico.....	W. coast S. America.

ATLANTIC TO PACIFIC—Continued.

No. ships.	Registry.	Registered gross tonnage.	Registered net tonnage.	Panama Canal net tonnage.	Tons cargo.	From—	To—
9	British.....	64,391	40,987	54,542	53,397	Europe.....	Australia & N Z'land
8	American...	34,198	21,765	27,388	24,351	U. S. coastwise.	
3	British.....	21,669	13,788	19,396	24,600	E. coast U. S.....	Australia & N. Z'land
2	American...	11,579	7,138	9,951	12,400	E. coast U. S.....	Australia & N. Z'land
5	.....	33,248	20,926	29,347	37,000	E. coast U. S.....	Australia & N. Z'land
2	British.....	2,298	1,304	1,398	1,458	Cristobal.....	W. coast Cen. Am.
2	Costa Rican	530	388	370	112	Cristobal.....	W. coast Cen. Am.
4	.....	2,828	1,692	1,768	1,570	Cristobal.....	W. coast Cen. Am.
2	American...	13,921	8,615	10,536	21,500	Mexico.....	W. coast U. S.
2	American...	12,356	7,660	10,764	17,473	E. coast U. S.....	British Columbia.
2	American...	5,150	4,416	4,429	4,733	E. coast S. America....	W. coast U. S.
2	Mexican....	2,559	1,659	2,638	Ballast...	Mexican coastwise.	
1	British.....	8,838	5,714	6,457	5,500	Canada.....	Australia & N. Z'land
1	American...	6,274	3,834	6,266	7,800	E. coast U. S.....	Philippines.
1	American...	2,643	1,654	2,163	1,681	Cristobal.....	W. coast U. S.
1	British.....	2,629	1,202	1,108	2,123	Europe.....	W. coast Mexico.
1	Peruvian...	542	252	188	125	Canada.....	W. coast S. America.
1	British.....	212	138	151	180	E. coast U. S.....	Papeete.
1	American...	101	28	22	12	Cuba.....	W. coast S. America.
3	*Miscel'ous.	115	88	88	Ballast.		
143	.....	622,073	396,312	492,504	539,954		

*One yacht and 2 launches of over 10 tons gross register.

The "Favorite" Repairing Roncador and Serrana Lights.

The steamship *Favorite* of the Panama Canal lighthouse service sailed on September 7 for Roncador Cay and Serrana Bank, in the Caribbean Sea, on the course to New Orleans, to renew the gas supply and repaint the structures of the lights maintained there.

A cable message from the United States received September 2, reported that the Serrana Bank light was out on August 22. Masters of vessels bound in that direction are being cautioned by the Port Captains.

Atlantic-Gulf and Pacific Lines.

The Atlantic-Gulf and Pacific Lines, operated by the Atlantic-Gulf and Pacific Steamship Corporation, of New York, are now engaged in the United States coastwise trade, between Philadelphia and Baltimore, on the Atlantic Coast, and Los Angeles and San Francisco on the Pacific, carrying cargo only. The steamship *Cape Romain*, from Philadelphia, is due at the Canal now, and the *West Apaum* was advertised to sail from Philadelphia on August 31. Definite schedule beyond these sailings has not been announced.

The company is also operating cargo ships between the Atlantic Coast of the United States and the west coast of South America, with irregular sailings.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight September 4, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship	Arrived at port		Entered Canal		Completed transit		Cleared for sea		Nationality	Line	Length	Beam	Salt water draft	From—	For—	Cargo		Panama Canal tonnage	
	Day	Hour	Day	Hour	Day	Hour	Day	Hour								Nature	Tons	Gross	Net
Mamari	28	8.30	29	6.25	29	14.33	29	15.30	British	Shaw, Saville & Albion Co.	455.0	56.0	28.11	London	New Plymouth	General	6,000	8,641	6,017
Carpentaria	28	18.28	29	7.04	29	15.21	29	16.15	British	British India Steam Nav. Co.	436.0	53.0	27.11	Hull	Brisbane	General	7,939	8,082	5,440
Willie A. Higgins	29	9.31	29	10.40	29	16.59	2	19.02	American	C. H. Higgins	200.0	41.0	14.0	Norfolk	San Francisco	Ballast		922	553
Western Knight	29	20.40	30	6.17	30	15.14	30	17.00	American	Admiral Line (S. B.)	409.8	54.2	25.8	Newport News	Cavite	Navy coal	6,489	6,546	4,557
Laura C. Hall *a*	26	15.22	30	6.42	30	15.10	31	9.09	British	Pacific Metals Corporation	81.0	25.6	9.0	Cristobal	Buenaventura	General	21	130	69
Mexico	30	9.19	30	10.14	30	16.20	4	11.42	Mexican	Mexican Navigation Co.	310.0	43.2	14.0	Progresso	Salina Cruz	Ballast		2,879	1,999
Acajutla	23	19.20	30	11.00	30	17.15	30	21.15	British	Pacific Steam Navigation Co.	215.7	33.5	16.0	Cristobal	Champerico	General	772	1,273	706
City of Joliet	22	17.08	30	11.13	30	19.23	30	20.43	American	Barber Steamship Co. (S. B.)	395.0	55.1	26.6	Philadelphia	Chemulpo	Kerosene oil	(*g*)	7,316	5,130
Noemi (*b*)	25	17.40	31	5.55	31	14.17	1	10.22	French	Soc. Gen. de Armement	281.0	40.0	13.5	Nantes	San Francisco	Ballast			2,013
Rosana (*c*)	27	14.43	31	6.18	31	14.08	31	10.22	Costa Rican	Alberto Fait	107.7	25.0	7.0	Cristobal	Puntarenas	General	62	256	185
Iceland	20	11.55	31	6.37	31	14.08	31	15.12	American	U. S. & Australian Line (S. B.)	400.7	54.2	24.5	New York	Lyttleton	General	5,800	6,528	4,732
Minnequa	30	17.15	31	7.55	31	15.23	31	16.26	American	Wessel Duval & Co. (S. B.)	390.0	54.2	20.3	New York	Talcahuano	General	5,000	6,106	4,355
Edgemoor (*d*)	28	10.15	31	10.00	31	16.54	31	18.22	American	United States Army (S. B.)	423.9	54.0	21.0	New York	San Francisco	General	3,859	7,486	5,827
Santa Elisa	31	12.04	1	6.21	31	13.28	1	14.20	American	W. R. Grace & Co.	360.3	51.7	22.6	New York	Valparaiso	General	2,242	5,957	4,325
West Cajoot	31	19.10	1	6.30	31	14.37	2	19.48	American	Cosmopolitan S. S. Corp. (S. B.)	410.0	54.4	25.0	Norfolk	Honolulu	Navy coal	7,049	6,447	4,698
Astmacho III	1	7.15	1	11.24	2	13.00	....	....	American	Astoria Mahogany Co.	265.0	42.5	13.0	New York	Balboa	Ballast		2,425	1,729
D. G. Schofield	2	1.05	2	6.52	2	13.57	2	17.58	American	Standard Oil Co.	439.4	58.0	27.0	Tampico	San Francisco	Crude naphtha	10,000	8,912	6,254
Bermuda	2	4.05	2	7.33	2	15.30	3	5.20	British	Lawther, Latta & Co.	469.0	57.2	17.0	Cardiff	Portland	Ballast		8,886	6,775
Chile	23	19.07	2	10.06	2	17.05	2	20.21	British	Pacific Steam Navigation Co.	350.3	43.1	19.0	Cristobal	Valparaiso	General	1,424	4,065	2,668
Aviles	2	15.05	3	6.17	3	13.12	3	14.30	Spanish	Cia. Genl. de Navigacion	370.0	42.2	14.0	Cartagena (*f*)	Arica	Ballast			
Tsurugisan Maru	3	6.15	3	7.45	3	16.03	3	17.25	Japanese	Mitsui Bussan Kabushiki Kaisha	356.0	45.0	24.6	Newport News	Iquique	Coal	4,740	4,100	3,033
Manavi	30	18.30	4	6.17	4	13.20	4	15.20	British	Pacific Steam Navigation Co.	216.0	35.2	13.0	Cristobal	Guayaquil	General	705	1,357	884
Coalinga	4	1.20	4	7.00	4	....	....	....	American	Union Oil Co.	471.0	55.0	30.0	Point Lobos	Antofagasta	Crude oil	(*h*)	8,108	5,877
Otira	4	6.47	4	7.29	4	14.29	4	20.30	British	Shaw, Saville & Albion Co.	450.0	58.0	27.0	Montreal	Sydney	General	6,109	8,154	5,309
Corinthic	3	17.20	4	7.55	4	16.06	4	17.35	British	White Star Line	500.0	63.3	28.1	London	Auckland	General	4,500	12,792	9,506
Woudrichen	3	23.17	4	9.05	4	16.55	....	....	American	Keystone Eng. & Equip. Co.	355.0	43.5	22.9	New York	Canton	General	3,750	....	....
Hornet (*e*)	4	8.10	4	9.55	4	17.24	5	8.04	American	S. E. Slade Lumber Co.	176.0	38.0	15.8	Jacksonville	San Francisco	Ballast		713	438
Gen. O. H. Ernst	2	17.10	4	11.36	4	19.01	4	20.00	American	Panama Railroad Steamship Line	356.4	45.3	17.4	Jacksonville	Caleta Buena	Ballast		4,503	2,764
Essequibo	3	12.09	4	11.46	4	18.19	4	20.00	British	Pacific Steam Navigation Co.	466.1	57.6	26.6	New York	Valparaiso	General	2,713	9,037	6,089

(*a*) Power schooner. (*b*) Bark. (*c*) Motor ship. (*d*) Transport. (*e*) Steam schooner. (*f*) Spain. (*g*) 216,000 cases oil and 300 barrels. (*h*) 70,000 barrels.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Submarine R-26	28	12.30	29	7.12	29	15.02	....	....	American	United States Navy	....	....	....	High seas	Cristobal	....	....	....	....
Durham	28	17.55	29	7.59	29	15.30	29	17.20	British	Federal Steam Navigation Co.	420.7	54.0	22.0	Adelaide	New York	(*i*)	3,766	7,137	5,296
S. V. Harkness	29	1.18	29	8.07	29	16.15	29	19.55	American	Standard Oil Co.	419.4	57.2	19.0	Iquique	Tampico	Ballast	....	7,443	5,545

(*i*) Lumber, tallow, gum, and machinery.

Pomona	28	6.19	29	8.41	29	17.40	29	17.40	American	Williams Dimond & Co. (S. B.)	440.0	56.0	27.6	Seattle	Antwerp	General	8,500	8,300	6,026
Einigkeit (*j*)	29	6.30	29	9.11	29	17.33			German	German Government	153.1	27.0	10.0	Arica	Cristobal (*p*)	Ballast		576	231
Indus	29	15.05	30	6.28	30	15.35	30	18.50	Swedish	East Asiatic Co	410.5	54.1	24.0	Portland	Hull, Eng.	Wheat	7,493	6,646	5,032
Oreoma	29	16.30	30	6.39	30	14.45	30	19.20	British	Pacific Steam Navigation Co	511.6	62.2	23.0	Valparaiso	Liverpool	General	2,503	12,267	7,94[illegible]
Orterie	30	6.45	30	8.15	30	16.20	31	6.31	British	Andrew Weir & Co	412.3	55.5	27.5	Tocopilla	Alexandria	Nitrates	9,550	7,159	5,309
Manavi	30	3.00	30	11.03	30	18.30	4	6.17	British	Pacific Steam Navigation Co	216.0	35.1	13.9	Guayaquil	Cristobal	General	705	1,357	884
Bradford	26	20.30	30	12.17	30	19.35	30	19.35	American	Standard Oil Co	426.9	54.6	22.6	Antofagasta	Tampico	Ballast		7,318	5,458
Hathor	29	7.00	30	12.21	(*o*)				German	Kosmos Line	471.9	61.0	21.3	Antofagasta	Cristobal (*p*)	(*q*)	7,987	9,108	6,707
Culebra (*k*)	4–3	20.11	30	11.27					American	United States Government	288.0	47.6	10.11	Balboa	Paraiso, C. Z.			2,245	159
Watonwan	30	11.00	30	12.40	30	23.23	31	11.07	American	Luckenbach Line (S. B.)	400.7	54.2	26.0	San Francisco	New York	General, lumber	6,721		
Point Bonita	29	8.00	30	12.46	30	22.05	2	7.04	American	Pacific Mail Steamship Co	289.0	44.1	19.0	San Francisco	Baltimore	General	2,458	2,895	1,993
Ballena	31	1.10	31	7.40	31	15.05	31	21.10	British	Pacific Steam Navigation Co	400.1	52.1	26.0	Valparaiso	Cristobal (*p*)	Nitrates	7,200	5,816	4,113
San Joaquin	31	2.30	31	7.48	31	15.37	31	17.20	Norwegian	W. Wilhelmsen	425.5	57.1	18.0	Antofagasta	Tampico	Ballast		7,059	5,081
Nishmaha	31	6.15	31	8.45	31	17.35	31	20.30	American	U. S. & A. Line (S. B.)	402.5	53.2	25.3	Noumea, N. C	New York	Chrome ore	8,000	6,611	4,794
Javary	31	12.15	31	13.13	31	19.52	31	20.38	American	Garland Steamship Corp	235.5	34.3	16.0	Hankow	New York	Wood oil	1,200	1,434	1,000
Balboa	31	16.05	1	6.21	1	13.27	5	6.12	American	Colombian Maritime S. S. Co	190.0	29.1	12.3	Buenaventura	Cristobal	(*r*)	606	741	350
Halo	31	3.45	1	6.49	1	14.22	1	16.00	American	McCormack & McPherson (S.B.)	435.0	56.0	17.0	San Francisco	Palo Blanco	Ballast			
Ancon	31	23.00	1	7.48	1	16.35	1	21.35	American	Panama Railroad Steamship Line	489.5	58.0	30.4	Mejillones	New Orleans	Nitrates	11,285	10,157	7,689
C. W. Fields (*l*)	25	15.40	1	7.57	1	16.15			American	United States Army	133.0	32.5		Balboa	Cristobal				
Santa Teresa	1	12.15	1	8.03	1	14.47	1	15.26	American	W. R. Grace & Co	360.2	51.6	24.6	Valparaiso	New York	(*s*)	4,107	5,726	4,086
Bologna	1	6.00	1	9.04	1	17.26	5	8.42	Italian	La Veloce Line	380.3	46.8	20.6	Valparaiso	Genoa	General	1,546	5,192	3,593
Sciota (*j*)	23	16.44	1	9.20	1	16.15			American	United States Navy	155.0	30.0		Balboa	Cristobal				
Scrata	1	21.20	2	7.47	2	15.15	2	17.55	British	Pacific Steam Navigation Co	390.0	47.3	22.0	Valparaiso	Bilbao	Nitrates	4,100	4,782	3,336
Caddo	19	4.00	2	12.27	2	19.14	3	12.05	American	Standard Oil Co	415.0	55.2	18.0	Pisagua	Tampico	Ballast		6,438	4,391
Kumara	2	1.15	3	7.50	3	15.25	3	18.35	British	Shaw, Saville & Albion Co	425.1	54.2	23.6	Wellington	London	Frozen, general	4,260	7,449	5,414
Jason (*m*)	3	12.15	3	8.00	3	15.45	4	16.48	American	United States Navy	514.0	65.0	20.6	San Francisco	Hampton R'ds	General	138	11,365	6,346
India (*n*)	2	15.00	3	8.00	3	16.10	3	16.10	Panaman	Lutri & Mora	34.4	9.3	2.0	Panama	Colon	Ballast			8
Richeoneal	3	7.10	3	8.55	3	17.10	3	17.38	American	Struthers & Dixon (S. B.)	435.0	56.0	19.5	San Francisco	Tampico	Ballast			
Palena	3	3.00	3	9.30	3	16.08	6	11.48	Chilean	South American Steamship Line	350.0	42.1	19.5	Valparaiso	Cristobal	General	9½	3,666	2,577
Bellepline	31	19.30	4	6.55	4	15.55	4	17.50	American	Robert Hasler & Co. (S. B.)	395.5	55.0	26.6	Antofagasta	New Orleans	Nitrates	8,826	6,841	4,816
Wangaratta	3	12.45	4	7.11	4	14.50	4	15.42	British	British India Steam Nav. Co	450.0	58.5	22.0	Wellington	New York	Frozen, general	3,259		
Grebbank	31	13.00	4	9.18	4	16.50	4	16.50	British	J. C. Gould	400.3	52.3	24.6	Taltal	Alexandria	Nitrates	7,450		
San Jose	4	2.00	4	11.38	4	18.25			American	Pacific Mail Steamship Co	283.0	37.0	21.0	San Francisco	Cristobal	General	147	2,352	1,602
Barges 4 and 5	4		4	14.45	4				Panaman	Thompson & Daly	124.0	24.5		Panama	Colon	Ballast			

(*j*) Tug. (*k*) Dredge. (*l*) Mine planter. (*m*) Collier. (*n*) Launch. (*o*) Anchor in Gatun Lake. (*p*) For orders. (*q*) Coconut cake, nitrate, asphalt, and lumber. (*r*) Castor seed, cocoa, coffee, hides, rubber, and nuts. (*s*) Nitrates, vanadium, and general.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
Aug. 29	Calamares	United Fruit Co	Port Limon.	Aug. 29	Calamares	United Fruit Co	New York via Habana.
Aug. 30	Pastores	United Fruit Co	New York via Habana.	Aug. 29	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Aug. 30	Meltonian	Leyland Line	Liverpool and wayports.	Aug. 30	Allianca	Panama Railroad Steamship Line	New York via Haiti.
Aug. 31	Puerto Rico	French Line	Havre via wayports.	Aug. 31	Pastores	United Fruit Co	Port Limon.
Aug. 31	Teviot	Royal Mail Steam Packet Co	London.	Sept. 1	Santa Leonora (*d*)	United States Army	New Orleans.
Aug. 31	Buford (*d*)	United States Army	New York via San Juan.	Sept. 1	Abangarez	United Fruit Co	New Orleans.

(Continued on page 56, column 2.)

New Record for Traffic in Canal Ports.—Comparison with Foreign-Trade Traffic in New York, Philadelphia, and Boston.

The traffic through the Canal terminal ports, Cristobal and Balboa, reached new high records in the month of August, 1920, when a new record for traffic through the Canal was also established. The previous high records were those made in December, 1919.

The total entrances and clearances at the 2 ports, including the ships which passed through the Canal, were as follows:

	Entered.		Cleared.		Total handling.	
	Vessels.	Net tonnage.	Vessels.	Net tonnage.	Vessels.	Net tonnage.
Cristobal—						
August, 1920	321	1,071,814	322	1,072,307	643	2,144,121
December, 1919	323	971,127	322	964,896	645	1,936,023
Balboa—						
August, 1920	294	928,515	286	911,576	580	1,840,091
December, 1919	282	833,657	285	842,886	567	1,676,543

The number of ships entering Cristobal and the total of those handled in that port were 2 less in August, 1920, than in December, 1919; in other respects the figures for August establish new high records, both in ships handled and in net tonnage.

Comparison of the traffic in the Canal terminal ports with the foreign-trade traffic in New York, Philadelphia, and Boston is afforded by figures in an article published in *The Journal of Commerce* of New York of July 24, 1920.

This reported a high record for the year 1920 having been made in New York in the month of June, when 508 ships, of 1,545,144 net tons, entered and 436 ships, of 1,364,297 net tons, cleared. The "total handling" was, accordingly, 944 vessels, of 2,909,441 net tons. The total handling in Cristobal in August was 68 per cent of the New York record for this year with respect to the number of ships and 73.7 per cent with respect to net tonnage; or, roughly, about seven-tenths of the foreign-trade traffic in New York. The domestic or coastwise traffic in New York, however, is considered to be about 3 times the foreign traffic (exact figures are not available); so that to reach a comparison of actual port movements, the percentages above, in comparison with foreign traffic, should be divided by 4. This would indicate the traffic in Cristobal in August to have been about 17½ per cent of the total traffic in New York Harbor in June. For normal months in both ports, it would appear that the traffic in Cristobal is between one-sixth and one-fifth of the total traffic in New York Harbor. This designation comprises everything above The Narrows, including both sides of the Hudson River, East River, the Harlem River, Gowanus Bay, Newtown Creek, and minor sections, and all of the Brooklyn, Flushing, and Jamaica sections, but does not include the strictly New Jersey section, having access to the ocean outside of The Narrows, and of which the parts are Arthur Kill, Raritan Bay, Newark Bay, and the Elizabeth and Raritan rivers. The New York section, as outlined above, is what is generally understood by the port of New York; and it is the port of the longest quayage and the greatest traffic in the world.

Philadelphia's record month so far this year, for foreign traffic, was May, when 129 vessels of 316,246 net tons, entered and 126 vessels, of 315,997 net tons, cleared. The "total handling" was 255 ships, of 632,243 net tons. No approximation of the domestic traffic can be

arrived at here. In comparison with Philadelphia's foreign traffic, the traffic in Cristobal is between 2½ and 3 times as great.

The record in Boston for this year was also made in June, when 120 ships, of 198,136 net tons, entered and 88 ships, of 124,594 net tons, cleared in the foreign trade alone; making a "total handling" in foreign trade of 208 vessels, of 322,730 net tons. Omitting any consideration of the domestic trade, the Cristobal traffic was about 3 times as many ships and 6 times as much net tonnage as that in the foreign trade of Boston. If the domestic trade in Boston Harbor is about 3 times the foreign trade, as in the case of New York, it would appear that the traffic in Cristobal is about the same as the aggregate traffic in Boston.

None of the traffic reported for the Canal ports is considered "domestic" or "coastwise." Vessels in the United States coastwise trade, passing through the Canal, are reported with the others, and the local Canal Zone or Panama coastwise traffic using the Canal terminal ports is practically nil.

German Seamen Attempt to Desert Ship in Canal.

During the passage of the German steamship *Lucie Woerman* through the Canal on September 6, on the way from Hamburg to Chile with some 688 seamen to man German sailing vessels which are to be returned to Europe under terms established by the Reparations Commission of the Allies, a number of the seamen slipped overboard and swam ashore with the intention of deserting. They began going overboard in the Gatun Lake section, approximately opposite Frijoles, and continued through Gaillard Cut. As soon as the matter was reported a police launch ran alongside the ship and prevented further desertions, while a call was sent out for the apprehension of all that came to land. Up to the time of the clearing of the *Lucie Woerman* from Balboa in the afternoon of September 7, 61 had been returned aboard, and 5, taken later, are now held by the police.

The master of the vessel was unable to say how many had gone overboard or even to state exactly how many had shipped on the vessel, as he had found a number of stowaways and in the mutinous condition of the men had not been able to secure a check on their number.

Service of the American Metal Transport Company.

The service of the American Metal Transport Company, Inc., between Atlantic ports of the United States and Peruvian and Chilean ports is not on fixed schedule, but averages 4 or 5 ships a month through the Canal. They usually sail from New York or Norfolk, with general cargo or coal, and returning, bring back nitrate, going to some Atlantic port according to orders—New Orleans, Savannah, Charleston, Norfolk, Baltimore, Philadelphia, or New York. During August passages of the company's vessels have been more frequent than usual, as sailings had been delayed, both in the United States and Chilean ports, by strikes.

The "Von Steuben" to go on World Cruise with Exposition.

The United States Shipping Board has sold the passenger liner *Von Steuben* to a company which has announced its intention of fitting the vessel out as a floating exposition of American products and sending it on a cruise around the world.

The *Von Steuben*, then a transport in the service of the United States, was repaired at Balboa shops during the three weeks from December

30, 1917, to January 26, 1918, and the rush work performed on her was made the subject of a note in THE PANAMA CANAL RECORD of January 30, 1918, the name of the ship being omitted for military reasons. The vessel had suffered 2 collisions, and 2 important items in the repairs were the building of a new stem, 60 feet long, and repairs to the stern; in addition to which extensive repairs were made to the fire main. the number of coaling chutes was increased, and alterations were made to increase her capacity for carrying coal. The force employed included 450 skilled mechanics and about 1,000 helpers and laborers. The total number of hours worked was about 400.

It is stated that the vessel will be changed from coal to oil burning, and generally reconstructed at a cost of about $3,000,000, the 3 lower decks being renovated for exhibition space, with the idea of allotting 100 square feet to each exhibitor. The name is to be changed to the *United States*.

The *Von Steuben* was formerly the *Kronprinz Wilhelm* of the North German Lloyd and in the early part of the war was a famous raider, having stayed at sea 251 days and sunk 15 vessels before she went into American waters at Newport News and was interned, in April 1915. She is a vessel of 14,908 gross and 5,162 net tons, 637.3 feet long by 66.3 beam, and was built in 1901 at Stettin.

Pacific Steamship Company Service through the Canal.

The Pacific Steamship Company, of Seattle, whose regular service is between that port and Japan, has been dispatching an occasional vessel through the Canal to New York or to European ports, as cargo offers. At times the intervals between its vessels passing through the Canal is as great as 3 months, at others 2 of its ships will arrive in the same month. This company works in conjunction with the North Atlantic and Western Steamship Company in the United States coastwise trade.

Notice to Mariners.—Front Range Light, Atlantic Approach to Panama Canal, Destroyed by Lightning.

THE PANAMA CANAL, BALBOA HEIGHTS, C. Z., August 30, 1920.

CIRCULAR NO. 643–75:

1. On August 27, 1920, the front range light (tower No. 5, Mindi), Atlantic Approach of the Panama Canal, was totally destroyed by lightning.
2. Until this light can be replaced, a temporary light of the same characteristic will be exhibited.

CHESTER HARDING,
Governor.

Notice to Mariners.—Obstruction to Navigation.

THE PANAMA CANAL, BALBOA HEIGHTS, C. Z., September 2, 1920.

CIRCULAR NO. 643-76:

The master of the steamship *Watonwan* reports by radio having passed at noon on August 29th, while in latitude 7° 08′ North, longitude 81° 30′ West, a submerged wreck about 100 feet long with short spars barely out of water, very dangerous to navigation.

CHESTER HARDING,
Governor.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, Pancanal, Washington."

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended September 4:

Steamships *Koyo Maru*, repairs to hull where damaged; *Talaralite*, boiler and engine repairs; *Bradford*, boiler and engine repairs; *Caddo*, boiler and engine repairs; *Adria*, boiler and engine repairs; *Marne*, rebuilding; *Willie A. Higgins*, auxiliary machinery repairs; *Cordelia*, boiler and engine repairs; *Grelbank*, boiler repairs; *West Cajoot*, main engine repairs; tender *Perico*, boiler repairs; U. S. S. *Tacoma*, machinery repairs; dredge *No. 83*, general repairs; barges *No. 133* and *141*, general repairs; submarine *R-22*, periodic repairs; steamship *Bellepline*, main turbine repairs; launch *Coco Solo*, clutch repairs.

The following vessels were at the Cristobal shops for repairs during the week ended September 6:

Steamships *Colon* and *General Ernst*, miscellaneous repairs and painting to engine, decks, and steward departments; *Point Bonita*, repair feed pumps, bilge pump, and steering gear; *Teviot*, repair winch, sanitary pump, and water service; *Puerto Rico*, repair ice machine; tug *Einigkeit*, repair boiler, blower engines, and auxiliaries; tug *Tavernilla*, repair and rebrick boiler, repair condenser, and repairs to piping; U. S. S. *Favorite*, retube port boiler, repair air, bilge, and ballast pumps, repair ice machine and make awnings; barge *No. 29*, overhaul barge and convert into De Mayo; steamships *Parismina*, *Caddo*, U. S. A. T. *Buford*, *Balboa*, *Essequibo*, dredge *Gamboa* and *Mevanic*, minor repairs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending September 4, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Calamares	United Fruit Co	August 29	August 29	95	15
Caribbean	Panama Railroad Cattle Industry		August 29		50
Acajutla	Pacific Steam Navigation Co		August 30		781
Allianca	Panama Railroad Steamship Line		August 30		1,518
Laura C. Hall	Pacific Metals Corporation		August 30		21
Pastores	United Fruit Co	August 30	August 31	585	94
Rosana	A. Fait		August 31		62
*Santa Leonora	United States Government		September 1		1,371
Chile	Pacific Steam Navigation Co		September 2		1,424
Point Bonita	Pacific Mail Steamship Co	August 30	September 2	303	662
Meltonian	Leyland Line	August 30	September 2	1,149	5
Manavi	Pacific Steam Navigation Co	August 30	September 4	705	705
Teviot	Pacific Steam Navigation Co	August 31	September 4	400	2,150
Parismina	United Fruit Co	August 31	September 2	953	45
Puerto Rico	French Line	August 31	September 3	293	145
*Buford	United States Government	August 31	September 3	123	20
Panama	Panama Railroad Steamship Line		September 3		2,531
Abangarez	United Fruit Co	September 1	September 1	½	(‡)
Santa Marta	United Fruit Co	September 1	September 2	2	205
Tivives	United Fruit Co	September 1	September 2	(†)	4
Colon	Panama Railroad Steamship Line	September 1		800	
Balboa	Colombian Maritime Co	September 1		606	
Caribbean	Panama Railroad Cattle Industry	September 2		200	
Essequibo	Pacific Steam Navigation Co	September 3	September 4	282	4
Palena	Chilean Steamship Co	September 3		10	
Gen. W. C. Gorgas	Panama Railroad Steamship Line	September 4		2,340	
San Jose	Pacific Mail Steamship Co	September 4		146	

* United States Army transport. † No cargo discharged. ‡ No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending September 4, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Point Bonita	Pacific Mail Steamship Co	August 29	August 30	327	7
Manavi	Pacific Steam Navigation Co	August 30	August 30	20	
Laura C. Hall	Pacific Metals Corporation	August 30	August 30		57
Halo	United States Shipping Board	August 31	September 1	1,493	
Balboa	Colombia Maritime Co	August 31	September 1	1	

Announcing a New Line from New Orleans in Coastwise Service.

The Seamen's Journal of San Francisco reports in its issue of August 18:

Lunham & Moore, of New Orleans, have announced a steamship service between the Gulf ports and ports on the Pacific. The service will begin with 1 steamship a month, with San Francisco and Portland as the principal ports of call.

Barber Line Service Around the World.

The Barber Steamship Lines, Inc., which send vessels through the Canal approximately every other day in its varied services, largely to the Far East, is operating an around-the-world service by sending some of its vessels from the Orient to New York by way of Suez and Mediterranean ports. Fixed schedule has not been announced but such despatches appear to be approximately every 2 months.

Sale of Former Panaman Vessel in Savannah.

The motor schooner *Belen Quezada*, formerly registered in Panama, was advertised to be sold by the United States marshal at Savannah on August 17. The *Belen Quezada* made transit of the Canal on January 10, 1920, bound from Port Angeles to Antilla, Cuba, with 850 tons of lumber. She is 213 feet in length by 30 feet beam and was drawing 16 feet of water at time of transit.

100-foot Contour Boundary of Gatun Lake.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 23, 1920.

CIRCULAR No. 651-1:

1. The map of the Gatun Lake shore, prepared jointly by The Panama Canal and the Panama Government, shows the 100-foot contour and such monuments as were placed on the ground to mark its limits.
2. Obviously it is impractical to mark the 100-foot contour line by monuments on the ground throughout its entire length. Furthermore, a detailed survey of the entire area bordering Gatun Lake was and still remains impractical owing to the prohibitive cost of such a survey.
3. The map prepared and the monuments placed are for the convenience of property owners in determining the limits of their property. The map does not purport to show every isolated 100-foot contour; nor, with the necessarily limited number of monuments, was it possible to mark on the ground all prohibited areas.
4. Property owners are hereby notified that they will be held responsible for any error in development or construction on land which by treaty agreement is under the jurisdiction of the United States Government.
5. In doubtful cases, and prior to any unnecessary expense, property owners are hereby notified to request the Section of Surveys of The Panama Canal to determine their boundary limits.

CHESTER HARDING,
Governor.

Books for Ancon Hospital.

The chaplain of Ancon Hospital, Rev. H. R. Carson, has issued an appeal for books to provide reading matter for the patients in Section A, American surgical and medical cases. Either single volumes or sets are desired, dealing with fiction, travel, biography, history, or science.

The Canal library is undertaking to meet this need and will issue books to the chaplain from its current stock and from special donations which may be made in response to this appeal. Books may be turned into the central library at Balboa Heights or to the librarian at Ancon, Balboa, Pedro Miguel, and Gatun clubhouses. A donor's card will be attached to the inside front cover of each of the books and they will be forwarded without expense or further trouble to the donors.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights (telephone 286):

Assistant in marketing fruits and vegetables (male and female); $1,200 to $1,800; form 2118; age, 21 years but not 45 years; vacancies in Bureau of Markets, Department of Agriculture, and in the field; December 1, 1920.*

Investigator in marketing fruits and vegetables (male and female); $1,800 to $2,760 a year; form 2118; age, 21 years but not 45 years; vacancies in Bureau of Markets, Department of Agriculture; December 1, 1920.*

Chemist, $3,000 to $4,000 a year; associate chemist; $2,000 to $3,000 a year (male and female); form 2118; age, within reasonable age limits; vacancies in the Chemical Warfare Service, Edgewood Arsenal, Edgewood, Md.; October 5, 1920.*

Magnetic observer; $1,140 a year (male and female); form 1312; age, 20 years but not 40 years; vacancies in the United States Coast and Geodetic Survey; September 28, 1920.*

Radio inspector; grade 1, $6 per diem; grade 2, $7.60 per diem (male and female); vacancies in the Fifteenth Naval District, Balboa, C. Z.; October 5, 1920.*

Junior civil engineer; $1,500 per year (male and female); No. 410-amended; form 1312; age, 20 years but not 30 years; vacancies in the Bureau of Public Roads, Department of Agriculture; September 28, 1920.*

Specialist in economic research; $3,600 to $4,500 a year (male and female); No. 475; form 2118; vacancies in the Bureau of Markets, Department of Agriculture; September 28, 1920.*

Tariff examiner; $1,620 a year (male and female); No. 366-amended; form 1312; age, 25 years but not 50 years; vacancies in the Interstate Commerce Commission, Washington, D. C.; September 22 and October 20, 1920.

Purchase agent; $2,400 a year (male and female); No. 476; form 1312; age, 21 years and over; vacancy at the Watertown Arsenal, Mass.; September 22, 1920.

Assistant director of educational work; Class A, $3,000 to $4,500 a year; Class B, $2,800 to $3,600 a year; Class C, $1,800 to $3,000 a year (male and female); age, within reasonable age limits; form 2118; No. 95-amended; vacancies in the Division of Venereal Diseases, Public Health Service; October 12, 1920.*

Captain, fire department; $1,800 to $2,000 a year; lieutenant, fire department; $1,500 to $1,800 a year (male and female); No. 459-supplemental; canceling announcement No. 459; September 14, 1920.

Naturalist; $2,200 a year (male and female); No. 472; form 2118; age, 25 years but not 45 years. vacancy in Bureau of Fisheries, steamer *Albatross:* September 21, 1920.*

*Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
John Victor Leach....	3508	United States...	Cristobal.....	Building Division.....	August 29, 1920
*John Murrell.....	43517	Barbados.....	Paraiso.....	Dredging Division.....	August 22, 1920.
Elbert S. Waid.....	4437	United States...	Colon Beach....	Panama Railroad.....	August 27, 1920.
Lewis Paul.....	43923	Martinique.....	Panama.....	Coaling Plants.....	August 12, 1920.
George Baum.....	5989	United States...	Cristobal.....	Supply Department....	September 1, 1920.

**Alias* Morrell, *alias* Morril.

Route Service Jitney—Cristobal-Mt. Hope.

The following is the schedule of the official jitney service between the Terminal building at Cristobal and Mount Hope. Cars stop at the office of the Commissary Division each way:

Leave Terminal Building.		Leave Mount Hope.	
A. M.	P. M.	A. M.	P. M.
8.00	12.30	8.15	12.45
8.30	1.00	8.45	1.15
9.00	1.30	9.15	1.45
9.30	2.00	9.45	2.15
10.00	2.30	10.15	2.45
10.30	3.00	10.45	3.15
	3.30		3.45

Official Circulars.

Substitution of Private Property for Public Property.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 28, 1920.

CIRCULAR NO. 656-15:

1. The substitution of private tools, instruments, equipment, or any other class of property privately owned, for public property in actual use or in storehouse stock of The Panama Canal or the Panama Railroad Company, is prohibited.

2. Violation of these instructions will be punished by discharge, and in cases warranting prosecution, criminal action will be instituted.

CHESTER HARDING,
Governor.

Appointments.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 1, 1920.

CIRCULAR NO. 661-88.

The following appointments, effective this date, are announced:

Commander F. V. McNair, U. S. N., Captain of the Port, Cristobal; Chairman, Board of Local Inspectors; and Member, Board of Pilot Affairs; *vice* Lieut.-Commander John G. Fels, U. S. N. R. F., resigned.

Lieut.-Commander S. L. Henderson, U. S. N., Captain of the Port, Balboa; Member, Board of Local Inspectors; and Member, Board of Pilot Affairs; *vice* Lieut.-Commander Chas. Svensson, U. S. N. R. F., assigned to other duties.

CHESTER HARDING,
Governor.

Issuance of Mileage Books.

PANAMA RAILROAD COMPANY,
OFFICE OF AUDITOR,
BALBOA HEIGHTS, C. Z., August 31, 1920.

CIRCULAR NO. RA 695:

To all concerned—Under Circulars RA 624, RA 684, and Governor's Circular 608-5 the sale of reduced rate mileage was authorized to employees, personnel of the United States Army and Navy, members of their families, servants, and nonresident visiting guests. It was not intended, however, to have this transportation issued in the name of "John Jones and family" as is being done in exceptional cases.

When this class of transportation is sold for use of family, the book and stubs should be issued to show the employee, as "John Brown, wife, 3 children and 2 servants." The names of visiting guests should be added, when properly authorized by letter from Executive office, or, as otherwise provided in Governor's circular 608-5.

This transportation will be honored for servants only when accompanied by employer, or other member of the family shown on the book.

The use of this mileage is also authorized under Circular RA 689, for use of employees of certain steamship lines, which in one case was issued to the steamship company "for employees." This is in error. The books should be issued when properly authorized in the name of steamship company for, not exceeding 5 employees showing the names of each individual entitled to this privilege.

Please be governed accordingly.

H. A. A. SMITH,
Auditor.

Approved and compliance directed.
S. W. HEALD,
Superintendent.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 49.

PORT OF CRISTOBAL—Continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Aug. 31	Parismina	United Fruit Co.	New Orleans.
Sept. 1	Abangarez	United Fruit Co.	New Orleans and wayp'ts.
Sept. 1	Colon	Panama Railroad Steamship Line.	Colombian ports.
Sept. 1	Santa Marta	United Fruit Co.	New York via Kingston.
Sept. 1	Tivives	United Fruit Co.	Colombian ports.
Sept. 2	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Sept. 3	Gen. W. C. Gorgas	Panama Railroad Steamship Line.	New York via Haiti.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Sept. 2	Tivives	United Fruit Co.	New York via wayports.
Sept. 2	Meltonian	Leyland Line	Galveston.
Sept. 2	Crescent (t)	H. A. Bodden	Colon.
Sept. 2	Santa Marta	United Fruit Co.	N. Y., Col., Jam., Cuba.
Sept. 2	Parismina	United Fruit Co.	N. Orleans and wayports.
Sept. 3	Panama	Panama Railroad Steamship Line.	New York.
Sept. 3	Buford (d)	United States Army	New York via San Juan.
Sept. 3	Puerto Rico	French Line	Havre and Pto. Colombia.
Sept. 4	Teviot	Royal Mail Steam Packet Co.	Cartagena.

(t) Schooner.

PORT OF BALBOA.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Sept. 4	Kaisho Maru	Katsuda Steamship Co.	Hongkong.
Sept. 4	Siskiyou	E. K. Wood Lumber Co.	Darien Harbor, R. P.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Aug. 29	Siskiyou	E. K. Wood Lumber Co.	Las Palma.
Aug. 30	Imperial	South American Steamship Co.	Valparaiso.
Sept. 4	Siskiyou	E. K. Wood Lumber Co.	San Francisco.

*Other than ships passing through the Canal.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

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Volume XIV. Balboa Heights, C. Z., September 15, 1920. No. 5.

The Fuel Situation.

THE PANAMA CANAL, MARINE DIVISION,
BALBOA HEIGHTS, C. Z., September 10, 1920.

To all steamship agents—Since the issuance of my last circular letter regarding the fuel situation, the following information has been received; and your particular attention is invited to the report of September 8 from Habana:

August 26—U. S. Shipping Board advises no change in fuel oil situation on west coast of South America, and that it will be 35 or 40 days before the Board will have oil there; that there is sufficient oil at Honolulu to meet the Board's requirements; that the Board has no oil at St. Thomas and will not have until September 20th or 25th.

September 1—Governor of Porto Rico states that stock of bunker coal at San Juan is practically exhausted, and that he will advise when replenished.

September 3—American Consul, Kingston, Jamaica, advises 2,900 tons coal just arrived; price nine pounds F. O. B. untrimmed.

September 3—Seven thousand barrels of fuel oil available at Salina Cruz; prospects favorable for considerable receipts in immediate future.

September 8—American Consul at Habana, Cuba, advises fuel oil situation unchanged since report of August 10 (my circular letter of August 20th); bunker coal situation better—21,000 tons on hand; 15,000 more expected within 10 days.

August 23 (received September 8th)—A firm in Port-of-Spain, Trinidad, invite attention to fact that Trinidad is exceptionally well placed to provide coal and fuel oil requirements of ships going both south and north.

September 9—U. S. Shipping Board advises no change in situation given in cable of 26th ultimo (above), except that they are now buying oil in open market at St. Thomas and expect small supply for their own vessels will be available on west coast of South America about October 7th.

E. P. JESSOP,
Marine Superintendent.

The "General Goethals" Rescues Crew of Sunken Submarine.

A cable message received from the New York office of the Panama Railroad Steamship Line on September 4 stated:

"Steamship *General Geo. W. Goethals* arrived 6 p. m. 3d instant; was delayed 12 hours standing by disabled submarine *S-5*, cutting hole in submarine stern projecting out of water 30 feet and rescuing crew of 40."

Press reports state that the submarine was resting on the bottom of the sea at a point about 45 miles off Cape Henlopen, Delaware, and that in the hope of attracting attention the crew had released a telephone buoy which went to the surface. The buoy was sighted by the *Goethals* and investigated. After communicating with the crew by means of the telephone the *Goethals* began efforts toward rescuing them, sending out at the same time radio calls for assistance, which were responded to by the U. S. S. *Ohio* and the steamship *Thantums*; and the vessels, working together, managed to raise the submarine sufficiently to allow the crew to be brought out.

On the voyage on which this occurred, the *Goethals* had sailed from Cristobal for New York via Port-au-Prince on August 25.

Whole Cargo of Silver Sand.

The Norwegian motor ship *George Washington*, of 7,093 gross tons, passed through the Canal on August 2, bound from Antwerp direct to San Francisco with a cargo of 9,000 tons of silver sand.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight September 11, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship	Arrived at port		Entered Canal		Completed transit		Cleared for sea		Nationality	Line	Length	Beam	Salt water draft	From—	For—	Cargo		Panama Canal tonnage	
	Day	Hour	Day	Hour	Day	Hour	Day	Hour								Nature	Tons	Gross	Net
Ucayali	2[illegible]	7.40	5	6 10	5	13.10	5	18.06	Peruvian	Peruvian Line	374.2	46 3	19.2	Cristobal	Callao	General	1,341	4,466	2,405
Balboa	1	3.27	5	6.12	5	13.36	5	21.45	American	Colombian Maritime Co	190 0	29 1	13.8	Cristobal	Buenaventura	General	226	741	350
Rooke	4	8.40	5	6.35	5	15.13	5	16 08	British	F. C. Strick & Co	345 9	48.1	22 6	Cardiff	Coquimbo	Coal	4,601	4,061	2,961
Maricopa	5	3.50	5	7.03	5	17 29	5	20.00	Norwegian	W. Wilhelmsen	435 0	57.0	27.0	Tampico	Tocopilla	Crude oil	10,000	6,996	5,118
Neptune (a)	5	8.06	5	8 29	5	16.20	8	9.48	American	United States Navy	542.0	65.0	24.8	Philadelphia	Pearl Harbor	Coal, misc	5,339	.....	.....
Artigas	5	7.17	5	8.40	5	18 07	5	19.05	American	N. Atlantic & Western Co. (S. B.)	390 0	54.2	19.8	Boston	Seattle	General	3,800	6,161	4,427
Trecarrell	5	3.55	6	6 21	6	13.05	6	17.43	British	Hain Steamship Co	400 0	52 0	15 7	Cardiff	Tocopilla	Ballast	.....	5,790	4,067
Tairoa	2	5 19	6	6.32	6	14.52	6	16.35	British	Shaw, Saville & Albion Co	477.0	63 2	18 6	New York	Brisbane	General	8,347	11,192	8,149
Morristown	5	2.41	6	6.45	6	15.53	6	16.57	American	Wessel Duval & Co. (S. B.)	377.0	52.8	19.0	New York	Valparaiso	General	4,000	5,206	3,743
Lucie Woermann	6	0.00	6	10.5	6	18.18	7	16.30	German	New Zealand Shipping Co	365.0	48 0	22.0	Hamburg	Iquique	Ballast	.....	4,897	3,640
Palena	3	8.08	6	11.48	6	18.28	6	23.00	Chilean	South American Steamship Line	350.0	42.0	23 6	Cristobal	Valparaiso	General	557	3,666	2,577
Standard Arrow	6	2 41	6	13 00	6	19 59	6	21.00	American	Standard Transportation Co	467.6	62.7	27 0	Beaumont	Taku, China	Petroleum	10,481	9,931	7,019
Sag Harbor	6	0.30	7	6 17	7	14.43	8	11.50	American	W. H. Tracy & Co. (S. B.)	264 0	42 2	22.6	Norfolk	Iquique	Coal	2,882	2,504	1,701
Galdamas	6	6 12	7	6 18	7	13.4	7	14.37	Spanish	Cia. Auxiliar Maritima	331.9	46 11	14.6	Bilbao	Balboa (c)	Ballast	.....	3,686	2,632
Memphis	6	12 40	7	6.23	7	13 36	7	14.35	British	Pacific Steam Navigation Co	471 0	61 0	16 6	London	Portland	Ballast	.....	9,100	6,754
Kent	6	19 23	7	6.28	7	15 24	7	16.30	British	Federal Steam Navigation Co	460.0	52 9	30.0	Liverpool	Auckland	General	8,600	10.503	8,121
Canada Maru	7	6 54	7	7.58	7	15 31	7	16.35	Japanese	Osaka Shosen Kaisha	400.0	51 0	20.0	New Orleans	Kobe	General	253	5,999	4,101
Heilbronn	7	6.56	7	12.05	7	19 00	7	21 52	British	British Ministry of Shipping	474 9	60 6	20.0	Cardiff	Colombia Riv.	Ballast	.....	9,028	6,151
San Jose	4	18.25	8	6.12	8	12.48	8	15.50	American	Pacific Mail Steamship Co	283.0	37 0	17.8	Cristobal	San Francisco	General	1,849	2,352	1,602
H. M Flagler	7	21 50	8	6.46	8	14.19	(b)	.....	American	Standard Oil Co	461.3	60 0	26.3	Tampico	Balboa	Fuel oil	(c)	8,606	6,525
Stanley Dollar	8	3 00	8	7 22	8	14 25	8	21.58	American	Robert Dollar Steamship Line	288 8	44 6	19 6	New York	San Francisco	General	2,000	3,460	2,404
Eemdijk	8	5.55	8	8.00	8	15.30	8	16.30	Dutch	Holland-American Line	467.0	58 0	15.6	Rotterdam	Vancouver	General	20	8,514	6,066
Patoka	6	6.15	8	6.23	10	15.12	10	16.00	American	United States Navy	477.0	60.0	23.6	Port Arthur	Cavite	Fuel oil	6,000	.....	.....
Theodore Roosevelt	9	7 18	9	7.48	9	14 49	10	7.56	Norwegian	Fred Olsen & Co	425 5	55 2	12 0	Christiania	Valparaiso	General	700	7,593	5,637
Salvador	5	18.55	11	6.15	11	13 05	11	14.58	British	Pacific Steam Navigation Co	215 0	33.0	15.6	Cristobal	Champerico	General	975	1,213	692
Lima Maru	10	11.55	11	6.20	11	13 59	11	14.58	Japanese	Nippon Yusen Kabushiki Kaisha	445.0	58.0	24.6	New York	Shanghai	(d)	6,980	7,674	5,383
Corcovado	10	10.53	11	6.25	11	15.20	11	16.41	British	Pacific Steam Navigation Co	390.0	47.0	23.5	Liverpool	Coronel	General	4,160	4,976	3,273
Ansaldo San Giorgio IV	10	1 30	11	6.30	11	14 50	11	15 06	Italian	Soc. Nazionale de Nav	393.11	51.0	15.6	Genoa	Valparaiso	General	900	.....	.....
Yeifuku Maru	10	16 13	11	6.31	11	15 40	11	16 40	Japanese	Kokusai Kisen Kabushiki Kaisha	385 0	51 0	26.8	Port Arthur	Shanghai	Case oil	7,000	5,933	4,595

(a) Collier. (b) Returned north. (c) For orders. (d) Structural steel and general. (e) 70,500 barrels.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Alssund	4	14 00	5	6.33	5	15.05	5	18.45	Danish	Th. Just	315.3	44.8	23.4	Puntarenas	Hamburg	General	5,050	.....	.....
Justin	4	17 09	5	6.36	5	15 00	5	15 00	American	Garland Steamship Corp	277.0	39.0	14.7	San Francisco	New York	General	680	.....	.....
Hermes	4	19 00	5	7.40	5	16 50	5	20.44	Dutch	Royal Netherland Steamship Co.	344.6	46.1	19.6	Antofagasta	Havre	General	3,885	3,949	2,685
Quernstad	4	19.30	5	7.54	5	16.20	5	18.10	Norwegian	B. J. Grefstad	290.0	42.0	19.0	Taltal	Savannah	Nitrates	3,334	2,385	1,668
Cauca	5	4.00	5	9.54	5	17.08	.....	.....	British	Pacific Steam Navigation Co	246.0	35.2	14.6	Guayaquil	Cristobal	General	416	1,582	1,023

Salvador	5	10.30	5	12.13	5	18.55	11	6.15	British	Pacific Steam Navigation Co.	215.0	33.5	13.6	Champerico	Cristobal	General	556	1,213	692
Mevania	5	11.45	5	12.38	5	20.40	6	17.48	American	Walker & Daly (S. B.)	425.8	57.0	27.0	San Francisco	New York	Gas, oil	(l)		
City of Para	5	1.00	6	6.33	6	17.00			American	Pacific Mail Steamship Co.	345.0	38.6	18.6	San Francisco	Cristobal	(h)	667	3,739	2,459
Waukegan	5	14.30	6	7.06	6	18.00	6	18.00	American	Barber Steamship Line (S. B.)	395.8	55.0	27.2	Ilo Ilo	Philadelphia	Sugar, lumber	10,000	7,285	5,256
Cordelia	8-30	5.00	6	13.35	6	20.50	6	21.00	British	C. T. Bowring Co.	420.3	54.6	17.0	Taltal	Tampico	Ballast		6,690	4,971
Amazon Maru	6	16.00	7	6.35	7	14.45	7	17.35	Japanese	Osaka Shosen Kaisha	425.0	56.2	27.0	Singapore	New York	(i)	8,132	7,901	5,629
Slavie Prince	7	14.30	8	6.40	8	15.15	8	17.00	British	Prince Line, Ltd	448.5	57.2	27.6	Shanghai	New York	General	9,300	9,139	6,725
Antinous	7	19.50	8	7.52	8	15.45	9	6.08	American	Green Star Line	401.4	53.2	27.0	Colombia river	Southampton	Ties	(m)	7,082	5,167
Grangepark	7	23.30	8	8.04	8	15.37	11	19.45	British	Denholm Line	400.5	52.3	22.6	Valparaiso	New York	(j)	5,000	5,710	4,017
Ebro	9	6.30	9	7.55	9	15.38	10	11.55	British	Pacific Steam Navigation Co.	450.3	57.8	25.0	Valparaiso	New York	General	3,374	9,089	6,215
Duendes	9	11.45	9	12.45	9	19.30	10	6.30	British	Pacific Steam Navigation Co.	390.0	50.0	17.6	Punta Arenas	Liverpool	(k)	1,593	6,014	4,494
Marica (f)	7	7.00	9	14.13	9	21.15	9	21.20	American	United States Army	448.9	60.2	29.0	San Francisco	New York	General	8,700	9,272	6,834
H. M. Flagler	8	14.19	9	15.57	9	22.25	9	22.2	American	Standard Oil Co.	461.6	60.0		Balboa	Tampico	Ballast		8,606	6,525
Lake Fluvanna	8	18.30	10	6.33	10	15.35	10	19.50	American	Earn Line (S. B.)	251.0	43.5	20.6	Caleta Buena	Philadelphia	Nitrates	3,150		
The Angeles	9	7.30	10	10.35	10	17.40	10	17.5	American	Col. Pacific Steamship Co. (S. B.)	410.0	54.4	24.0	Portland	Leith	Wheat	6,104	6,476	4,685
Tascalusa	10	15.00	11	6.48	11	13.50	11	13.50	British	Standard Transportation Co.	420.5	54.4	19.0	San Francisco	Beaumont	Ballast		6,661	4,610
Steel Trader	10	15.35	11	6.58	11	14.15	11	17.20	American	United States Steel Products Co.	424.2	56.2	24.0	Vancouver	New York	Lumber, general	6,000		
Mount Etna	10	16.20	11	7.28	11	15.00	11	18.15	British	Sefton Steamship Co.	380.0	49.0	22.6	Vancouver	Genoa	Lumber, general	5,900	4,630	3,421
West Kader	10	23.00	11	8.42	11	16.10	11	16.15	American	Sudden Christianson (S. B.)	410.0	54.0	23.6	Portland	Cork	Wheat	6,140	6,623	4,893
West Kedron	11	4.30	11	9.12	11	17.20	11	23.15	American	Williams Dimond (S. B.)	410.5	54.3	23.0	San Francisco	United King	Barley (n)	7,028		
West Togus	11	9.30	11	10.39	11	18.45	11	21.25	American	N. Atlantic & Western Co. (S. B.)	409.8	54.2	25.0	Tacoma	New York	Flour (o)	6,919	6,589	4,838
Celebes Maru	10	18.30	11	12.33	11	19.45	11	19.45	Japanese	Osaka Shosen Kabushiki Kaisha	385.0	51.0	18.6	Calcutta	New Orleans	General	2,609	6,014	4,406
Chance Devine (g)	11	6.00	11	8.30	12	14.30			Panaman	D. Rotti	19.5	3.4		Panama	Colon			1	1

(f) U. S. Army transport. (g) Cayuco. (h) Coffee, hides, skins, and merchandise. (i) Coconut oil, lumber, rubber, rice, sugar, and general. (j) Cotton, sugar, and ores. (k) Wool, skins, ores, etc. (l) 60,000 barrels. (m) 4,798,000 ft. B. M. (n) Short tons. (o) Long tons.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
Sept. 5	Pastores	United Fruit Co.	Port Limon.	Sept. 5	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Sept. 5	Chinampa	Standard Oil Co.	Tampico.	Sept. 5	Colon	Panama Railroad Steamship Line.	New York.
Sept. 6	Ulua	United Fruit Co.	New York via Habana.	Sept. 5	Pastores	United Fruit Co	New York via Habana.
Sept. 6	Cartago	United Fruit Co.	New Orleans.	Sept. 6	Owl	United States Navy	Norfolk.
Sept. 7	Stuyvesant	Royal Dutch West India Mail Co.	Amsterdam and wayports	Sept. 7	Ulua	United Fruit Co.	Port Limon.
Sept. 8	Atenas	United Fruit Co.	N. O and wayports.	Sept. 8	Chinampa	Standard Oil Co	Tampico.
Sept. 8	Frednes	J. C. Knudsen	New York.	Sept. 8	Cartago	United Fruit Co.	New Orleans, via Bocas, Limon, and Habana.
Sept. 9	Elm Leaf	Anglo-Saxon Petroleum Co.	Curacao.				
Sept. 9	Caribbean	Panama Railroad Cattle Industry	Cartagena.	Sept. 8	Stuyvesant	Royal Dutch West India Mail Co.	Cartagena.
Sept. 9	Ulysses	Panama Railroad Steamship Line	Norfolk.	Sept. 8	Atenas	United Fruit Co.	New Orleans.
Sept. 10	Cristobal	Panama Railroad Steamship Line	New York.	Sept. 8	Frednes	J. C. Knudsen	Cape Gracias.
Sept. 10	Calcutta (H. M. S.)	British Government	Trinidad.	Sept. 9	Gen. W. C. Gorgas	Panama Railroad Steamship Line.	Puerto Colombia.
Sept. 10	Bonham	United States Shipping Board	Cienfuegos.				
Sept. 11	Vinton County	United States Shipping Board	New York.				

PORT OF BALBOA.

*ARRIVALS.				*DEPARTURES.			
Sept. 6	Guardian (p)	All America Cables Co.	Callao.	Sept. 5	Tacoma (q)	United States Navy	San Francisco.
Sept. 11	Cleveland (q)	United States Navy	Amapala.	Sept. 7	Kaisho Maru	Katsuda Steamship Co.	Valparaiso.
				Sept. 8	Guardian (p)	All America Cables Co.	Callao.

(p) Cable ship. (q) Cruiser. *Other than ships passing through the Canal. Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending September 11, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	*Tons.*
Colon	Panama Railroad Steamship Line		Sept. 5		1,459
Balboa	Colombia Maritime Co		Sept. 5		226
Caribbean	Panama Railroad Cattle Industry		Sept. 5		1
Pastores	United Fruit Co	Sept. 5	Sept. 5	72½	(*)
Salvador	Pacific Steam Navigation Co	Sept. 5	Sept. 11	556	975
Cauca	Pacific Steam Navigation Co	Sept. 5		416	
Palena	Chilean Steamship Co		Sept. 6		547
Ulua	United Fruit Co	Sept. 6	Sept. 7	610	11
Cartago	United Fruit Co	Sept. 6	Sept. 8	656	6½
San Jose	Pacific Mail Steamship Co		Sept. 8		1,859
William Isom	American Italian Commercial Corp.	Sept. 6		4,000	
City of Para	Pacific Mail Steamship Co	Sept. 6		667	
Stuyvesant	Royal Netherlands Steamship Co	Sept. 7	Sept. 8	15	164
Atenas	United Fruit Co	Sept. 8	Sept. 8	2	(*)
Ansaldo S. Giorgio IV.	Societa Nazionale di Navigazione.	Sept. 9	Sept. 11	32	(*)
Ulysses	Panama Railroad Steamship Line	Sept. 9		12,036	
Caribbean	Panama Railroad Cattle Industry	Sept. 9		210	
Coreovado	Pacific Steam Navigation Co	Sept. 10	Sept. 11	120	81
Cristobal	Panama Railroad Steamship Line	Sept. 10		5,080	

*No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending September 11, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	*Tons.*
Balboa	Colombia Maritime Co	Sept. 5	Sept. 5		117
Cauca	Pacific Steam Navigation Co	Sept. 5	Sept. 5	10	
City of Para	Pacific Mail Steamship Co	Sept. 5	Sept. 6	67	
San Jose	Pacific Mail Steamship Co	Sept. 8	Sept. 8		12
H. M. Flagler	Standard Oil Co	Sept. 8	Sept. 9	10,071	
Celebes Maru	Osaka Shoshen Kaisha	Sept. 10	Sept. 11	150	

First German Line Through the Canal.

The Danish steamer *Alssund*, chartered by the Kosmos Line, arrived at Balboa on September 4, bound from Punta Arenas, Chile, via Callao, for Hamburg. This is the first vessel operated directly by German interests to have made use of the Canal. A number of German vessels have passed through the Canal, mostly bound from Chile to Europe, but these have been under the orders of the British Admiralty.

The *Alssund* was carrying 5,050 tons of general cargo. She is a vessel of 4,123 gross tons, 315.8 feet in length by 44.8 feet beam.

Return of the "Renown" with the Prince of Wales.

The British battle cruiser *Renown*, the largest ship to have used the Canal, made her second transit on September 13, bearing the Prince of Wales on his return to Great Britain from visits in Pacific ports. The *Renown* is 795 feet in length, over all, and her displacement is 33,379 tons.

No ceremonies, other than the salutes in the ports, marked the second visit of the Prince. He disembarked at Gatun Locks and, in company with members of his staff and Isthmian officials, spent part of the afternoon fishing for tarpon below the Gatun spillway. In the evening he was host at a dinner aboard his ship. The *Renown* cleared for the United Kingdom, via Trinidad, at 7 a. m., September 14.

White Star Liner "Megantic" to Go on West Indian Cruises.

The steamship *Megantic* of the White Star Line is to be used during the coming winter for 3 cruises through the West Indies, calling at Cristobal, according to advice received from the International Mercantile Marine. Under the proposed schedule the *Megantic* is to arrive at Cristobal at about 7 a. m. and sail at 6 p. m. on the same date. It is anticipated that about 400 passengers will go on each cruise, and the information furnished the company by The Panama Canal as to special trains for their accommodation in sight-seeing has been based on this number. The itineraries and dates of sailing have not been announced.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended September 11:

Barges *Nos. 102* and *121*, being decked over hoppers for garbage service; barges *Nos. 133* and *141*, general repairs; barge *No. 131*, general repairs and repairs to hull where rammed by a steamship; U. S. S. *Tacoma*, auxiliary machinery repairs and repairs to hull where rammed by a tug; steamship *Cordelia*, boiler and machinery repairs; tug *Cocoli*, minor repairs; steamships *West Cajoot*, main engine repairs; *Adria*, boiler and machinery repairs; *Talarite*, boiler and machinery repairs; motor ship *Astmahco III*, main engines, auxiliary machinery and boiler repairs; steamship *Koyo Maru*, repairs to hull where damaged in grounding;* dredge *No. 83*, general overhauling; steamships *Marne*, rebuilding; *Woudrichem*, boiler and auxiliary machinery repairs; U. S. A. T. *Marcia*, expansion joints made for the main turbine; steamship *Lake Flurianna*, minor repairs.

* This is one of the most interesting jobs, so far handled in the 1,000-foot dry dock, from the viewpoint of a person unfamiliar with ship work. It is now possible to look through the No. 1 hold while standing on the dock wall.

The following vessels were at the Cristobal shops for repairs during the week ended September 13:

Steamships *General Gorgas*, *Ulysses*, *Cristobal*, miscellaneous repairs and painting to engine, deck, and steward departments; U. S. S. *Eagle No. 8*, install 25 tons of ballast; U. S. S. *C. 285*, renew cylinders, overhaul auxiliary engine, etc.; tug *Porto Bello*, renew propeller, repair stern bushing, clean and paint, conduct inclining experiment; steamships *Cauca*, repair stem and renew plates in bow; *City of Para*, repair evaporator, bilge pumps, and dynamo governor; *Elm Leaf*, electric weld boiler, renew tubes and minor repairs to engines and auxiliaries; *Bonham*, repack stern gland, renew bricks and tubes in boilers, overhaul all pumps, winches, and piping; caulk deck and bulkheads; *Urubamba*, electric weld boiler stays, repair lifeboats, hawsepipe, and piping; *Goldemes*, *San Jose*, *Stuyvesant*, *Salvador*, schooner *Arabia*, steamships *Caribbean*, *Steel Trader*, U. S. *Forse*, *William Isom*, and U. S. S. *Bath*, minor repairs.

Prices of Miscellaneous Supplies.

The following are prices to individuals and companies, including the 25 per cent surcharge, effective September 1, 1920:

Commodities	Unit.	Price.
Brass, bar	Lb.	$0.46
Brass, sheet	Lb.	.75
Bronze, Tobin	Lb.	.43
Cement, at Panama:		
Departments of United States Government (including surcharge and bags)	Bag	1.1925
Credit for empty bags returned	Bag	.085
Individuals and companies (including surcharge and bags)	Bag	1.97
Credit for empty bags returned	Bag	.25
Cement, at Colon:		
Departments of the United States Government (including surcharge and bags)	Bag	1.0475
Credit for empty bags returned	Bag	.085
Individuals and companies (including surcharge and bags)	Bag	1.81
Credit for empty bags returned	Bag	.25
Charcoal	Cwt.	1.25
Copper bar	Lb.	.46
Gasoline, in drums (motor grade)	Gal.	.56
Lead, sheet	Lb.	.17
Lead, pig	Lb.	.125
Lumber, ceiling, siding, and flooring, 1" x 6"	M ft. B. M.	118.75
Lumber, flooring, 1" x 3" and 1" x 4"	M ft. B. M.	143.75
Lumber, yellow pine or fir, except ceiling	M ft. B. M.	100.00
Metal, yellow	Lb.	.375

Commodities.	Unit.	Price.
Nuts, iron, machine, hexagon	Lb.	$0.25
Nuts, iron, machine, square	Lb.	.225
Nails, common wire	Lb.	.075
Nails, galvanized	Lb.	.125
Oakum, navy, spun	Lb.	.20
Oakum, navy, unspun	Lb.	.20
Oil, fuel, at Balboa and Cristobal, in bulk:		
United States Army and Navy, and vessels operated by same—barrel of 42 gallons	Bbl.	3.50
Commercial vessels and individuals and companies—barrel of 42 gallons	Bbl.	3.50
Oil, fuel, at Balboa and Cristobal, in drums and barrels:		
United States Army and Navy, and vessels operated by same—barrel of 42 gallons	Bbl.	3.75
Commercial vessels and individuals and companies—barrel of 42 gallons	Bbl.	3.75
Oils, greases, and lubricants:		
Oil, air compressor cylinder	Gal.	.575
Oil, ammonia cylinder	Gal.	.47
Oil, burning	Gal.	1.56
Oil, cylinder, dark, marine	Gal.	1.125
Oil, cylinder, dark, marine	Gal.	1.25
Oil, ice machine, steam	Gal.	1.00
Oil, engine, dynamo	Gal.	.79
Oil, engine, in tins	Gal.	.69
Oil, engine, in barrels	Gal.	.44
Oil, gas engine, heavy, in barrels	Gal.	.69
Oil, gas engine, heavy, in cases	Gal.	.975
Oil, gas engine, in drums, medium	Gal.	.60
Oil, kerosene, in drums	Gal.	.375
Oil, kerosene, in tins (cases)	Gal.	.45
Oil, linseed, boiled	Gal.	2.50
Oil, linseed, raw	Gal.	2.60
Oil, locomotive engine	Gal.	.59
Oil, lard	Gal.	2.07
Oil, marine engine	Gal.	1.06
Oil, marine engine	Gal.	.625
Oil, marine engine	Gal.	.44
Oil, marine engine	Gal.	.75
Oil, marine engine	Gal.	1.02
Oil, mineral seal	Gal.	.375
Oil, nonliquid	Lb.	.09
Oil, stationary engine	Gal.	.49
Oil, sperm	Gal.	2.875
Oil, signal	Gal.	1.375
Oil, valve	Gal.	.975
Oil, car	Gal.	.34
Grease, black gear	Lb.	.115
Grease, yellow, cup, No. 3	Lb.	.14
Grease, yellow, cup, No. 5	Lb.	.17
Grease, rod, special	Lb.	.25
Grease, tunnel bearing	Lb.	.215
Tallow	Lb.	.225
Turpentine	Gal.	2.69
Turpentine substitute	Gal.	.69
Vaseline	Lb.	.11
Paint, lead, white, dry	Lb.	.15
Paint, lead, white, in oil	Lb.	1.75
Paint, zinc, white, dry	Lb.	.225
Paint, zinc, white, in oil	Lb.	.20
Paint, zinc, 35 per cent in oil	Lb.	.19
Rivets	Lb.	.10
Rope, Manila, ¼″ diameter	C. ft.	.69
Rope, Manila, ⅜″ diameter	C. ft.	1.50
Rope, Manila, ½″ diameter	C. ft.	2.50
Rope, Manila, ⅝″ diameter	C. ft.	4.06
Rope, Manila, ¾″ diameter	C. ft.	4.88
Rope, Manila, ⅞″ diameter	C. ft.	7.00
Rope, Manila, 1″ diameter	C. ft.	8.75
Rope, Manila, 1¼″ diameter	C. ft.	12.50
Rope Manila, 1½″ diameter	C. ft.	19.69
Rope, Manila, 1¾″ diameter	C. ft.	26.81
Rope. Manila, 2″ diameter	C. ft.	31.44
Rope. Manila, 2½″ diameter	C. ft.	46.88
Rope, Manila, 3″ diameter	C. ft.	76.25
Rope, Manila, 3½″ diameter	C. ft.	91.25
Rope, Manila, 4″ diameter	C. ft.	111.44
Soap, laundry	Lb.	.175
Soda, ash	Lb.	.05
Steel, bar	Lb.	.06
Steel, spring	Lb.	.21
Steel, cold, round (rolled)	Lb.	.20
Steel, sheet	Lb.	.06
Steel, structural (angles, beams, etc.)	Lb.	.06
Tin, block	Lb.	.79
Tin, banca	Lb.	.75
Tin, sheet	Lb.	.225
Washers cut	Lb.	.15
Waste, colored	Lb.	.26
Waste, white	Lb.	.26
Zinc, boiler plate, ⅝″ x 6″ x 12″	Lb.	.17

Weather Conditions in August, 1920.

The rainfall for the month was above normal everywhere except at Taboga, the Indio station on the upper Chagres, Bohio, and at stations near the continental divide. The rainfall on the Atlantic Coast was unusually heavy, the August total at Brazos Brook and Porto Bello being the highest on record for the month, and the total at Colon the greatest August rainfall since 1883. Totals in the Canal Zone and vicinity ranged from 5.86 inches at Taboga to 27.45 inches at Porto Bello. The greatest amount of rainfall recorded on any one day was 8.57 inches, at Porto Bello on the 19th.

The estimated August rainfall over the Gatun Lake watershed was 13.67 inches, compared with a 10-year mean of 11.77 inches; over the Chagres River basin above Alhajuela it was 17.54 inches, compared with a 19-year mean of 14.52 inches.

The air temperature, relative humidity, temperature of the sea, and evaporation were generally below the normal, while the atmospheric pressure and daytime cloudiness were above the average. The wind movement was near the normal on both coasts, and over the interior.

The usual number of fogs occurred at interior stations, all of which lifted or were dissipated by 8.30 a. m.

A seismic tremor was recorded on the 3d.

Gatun Lake hydrology—Mean elevation of Gatun Lake was 85.60 feet; maximum, 85.74 feet, on the 15th; minimum, 85.49 feet, on the 3d and 10th; evaporation from Gatun Lake surface was 2.754 inches; rainfall on Gatun Lake watershed, 13.67 inches; total yield of Gatun Lake watershed, 7.64 inches on the watershed. The total yield amounted to 56 per cent of the rainfall.

Climatological conditions at the representative stations are summarized in the following table:

Stations.	Pressure (reduced to mean of 24 hours.)	Temperature.					Mean relative humidity.	Precipitation.			Wind.				
		Mean.	Maximum.	Date.	Minimum.	Date.		Total inches.	Station average.	Days with .01 inch or more.	Total movement (miles.)	Prevailing direction.	Maximum velocity in miles.	Direction.	Date.
Balboa Heights	29.846	80.3	92	Aug. 25	70	Aug. 15	85.6	12.22	7.91	19	4,945	N.W.	30	N.W.	Aug. 20
Colon	29.856	80.7	90	Aug. 14	73	Aug. 22	86.2	23.04	15.00	28	6,519	W.	30	N.	Aug. 16
Gamboa	.....	79.0	90	Aug. 24	71	Aug. 12	....	8.97	11.70	26	3,192	N.W.	18	N.W.	Aug. 20
Gatun	.....	79.4	87	*Aug. 12	73	*Aug. 7	....	15.23	14.07	28	4,209	N.W.	24	S.E.	Aug. 12

*And other dates.

October Weather Probabilities.

During the month of October, 1920, the following weather conditions may be expected at the Canal entrances. Predictions are based on the records at Colon and Balboa Heights for the past 13 and 14 years, respectively:

Winds—Light, variable winds will prevail over the Atlantic Coast with an average hourly velocity of about 7 miles. The prevailing direction of the wind is usually from the southeast, although a considerable percentage of west and northwest winds may be expected during the month. A maximum velocity of from 30 to 38 miles an hour may be expected during the passage of local rain or thunder squalls.

Over the Pacific Coast and the interior, light northwest winds will prevail with an average hourly velocity of about 6 miles. Here, too, during occasional rain or thunder squalls, the maximum velocity of the wind may exceed 30 miles an hour, but these wind storms are invariably of short duration.

Rain—The average October rainfall at the Atlantic entrance of the Canal is 15.03 inches, and on the Pacific side 10.33 inches, these averages being for periods of 50 and 23 years, respectively. About 25 days with rain may be expected on the Atlantic Coast, and 22 on the Pacific Coast, while the average number of days with heavy rain (1 inch or more) has been 6 at the Atlantic entrance and 3 at the Pacific. Throughout the length of the Canal, the greatest part of the rainfall occurs during the daytime, the heaviest rainfall generally occurring between the hours of 1 p. m. and 4 p. m. However, at this season of the year, the percentage of daytime rainfall is higher over the interior and Pacific Coast than over the Atlantic Coast, and heavy rainfall may be expected on the Atlantic side during the early morning hours. Over both coasts the time of least rainfall is from 8 to 9 a. m.

Fogs—No fogs are likely to occur at either Canal entrance, but night and early morning fogs will be numerous over the interior. About 25 nights with fog may be expected over the Gaillard Cut section of the Canal, but as all fogs lift or are dissipated before 8.30 a. m., they should not prove a hindrance to navigation.

Temperature—The average shade air temperature will be about 79 degrees Fahrenheit on both coasts. On the Atlantic Coast the temperature is not likely to rise above 90° F., or fall lower than 70° F., while on the Pacific side the maximum temperature may be as high as 94° F. and the minimum as low as 68° F. The mean daily range of temperature will be about 10° F. on the Atlantic Coast and 14° F. on the Pacific Coast.

Barometric pressure—The average sea-level atmospheric pressure will be approximately 29.85 inches over both coasts. The maximum pressure for the month is not likely to exceed 29.95 inches, or the minimum to be lower than 29.70 inches.

Relative humidity—The humidity of the atmosphere should average about 87 per cent over both coasts. The daily range in humidity is greater on the Pacific Coast than on the Atlantic side, the average nighttime humidity being higher and the midday humidity lower than on the Atlantic side. The figures for years of records are 94 and 74 on the Pacific side and 92 and 78 on the Atlantic.

Storms—The Isthmus is seldom visited by violent or widespread atmospheric disturbances, although rain, wind, or thunder storms of more or less limited extent are of common occurrence, and may be expected quite frequently during the month. Rough weather may be experienced occasionally to the northward of the Atlantic entrance, as this is the season of the West Indian hurricane. The path of these storms lies well to the northward of the Isthmus, but a rough sea accompanied by brisk winds may be expected outside the breakwaters, following the passage of one of these storms. Generally cloudy weather will continue over both coasts, and smooth seas are usually experienced at the Pacific entrance during the month of October.

Tides—Tidal fluctuations on the Atlantic side do not affect navigation as the extreme tidal range at Colon is less than 2 feet.

Panama (Balboa) tide predictions for the month are presented in the following table:

Day of-		Time and Height of High and Low Water.				Day of-		Time and Height of High and Low Water.				Day of-		Time and Height of High and Low Water.			
W.	Mo.					W.	Mo.					W.	Mo.				
F	1	5:36	11:54	**6:01**	.....	Tu	12	3:38	9:55	**4:02**	**10:10**	S	23	0:04	6:20	**12:34**	**6:46**
		17.0	-0.2	**16.4**	.....			16.6	0.1	16.5	**0.5**			12.5	4.9	**12.2**	**4.0**
S	2	0:12	6:18	**12:34**	**6:44**	W	13	4:18	10:34	**4:44**	**10:49**	S	24	0:57	7:16	**1:27**	**7:30**
		0.6	16.8	**0.2**	**16.1**			16.8	-0.2	**16.5**	**0.5**			13.3	4.1	**13.1**	**3.0**
S	3	0:55	7:02	**1:20**	**7:30**	Th	14	4:57	11:12	**5:23**	**11:26**	M	25	1:45	8:07	**2:12**	**8:27**
		1.2	16.2	**1.0**	**15.5**			16.6	0.0	**16.2**	**0.9**			14.3	3.0	**14.0**	**2.9**
M	4	1:46	7:51	**2:14**	**8:23**	F	15	5:37	11:48	**6:03**	.....	Tu	26	2:26	8:51	**2:52**	**9:10**
		2.0	15.4	**1.9**	**14.8**			16.2	0.5	**15.8**	.....			15.2	1.8	**15.0**	**1.9**
Tu	5	2:48	8:48	**3:18**	**9:27**	S	16	0:04	6:15	**12:24**	**6:40**	W	27	3:07	9:33	**3:34**	**9:52**
		2.9	14.5	**2.7**	**14.0**			1.6	15.6	**1.2**	**15.1**			16.1	0.7	**15.8**	**1.0**
W	6	3:57	10:02	**4:29**	**10:49**	S	17	0:41	6:50	**1:03**	**7:18**	Th	28	3:48	10:14	**4:17**	**10:32**
		3.5	13.8	**3.2**	**13.7**			2.4	14.9	**2.2**	**14.4**			16.7	-0.2	**16.4**	**0.4**
Th	7	5:10	11:26	**5:41**	.....	M	18	1:21	7:27	**1:47**	**7:58**	F	29	4:30	10:54	**4:59**	**11:14**
		3.7	13.6	**3.3**	.....			3.4	14.0	**3.2**	**13.8**			17.2	-0.6	**16.7**	**0.2**
F	8	0:09	6:24	**12:41**	**6:52**	Tu	19	2:11	8:06	**2:36**	**8:41**	S	30	5:16	11:36	**5:47**	**11:58**
		14.0	3.3	**14.1**	**2.9**			4.3	13.1	**4.1**	**12.9**			17.3	-0.7	**16.8**	**0.4**
S	9	1:15	7:29	**1:42**	**7:52**	W	20	3:06	8:53	**3:35**	**9:46**	S	31	6:05	**12:19**	**6:35**	.....
		14.8	2.5	**14.9**	**2.2**			5.0	12.3	**4.8**	**12.4**			17.0	**-0.4**	**16.6**	.....
S	10	2:08	8:25	**2:33**	**8:45**	Th	21	4:11	10:03	**4:39**	**10:54**						
		15.6	1.5	**15.6**	**1.4**			5.4	11.8	**5.1**	**12.2**						
M	11	2:55	9:12	**3:21**	**9:30**	F	22	5:15	11:26	**5:44**	.....						
		16.2	0.7	**16.2**	**0.8**			5.4	11.7	**5.1**	.....						

The tides are placed in the order of their occurrence; the *times* of high and low tides are shown on the upper lines. The figures in boldfaced type are hours and elevations between noon and midnight; *ante meridian* figures are given in the ordinary lightfaced type. The time is Cosmopolitan Standard for the meridian 75° W.

The *elevations* of the water are shown on the second line for each day; a comparison of consecutive heights will indicate whether it is high or low water. Heights are reckoned from low mean water springs, which is 8.3 below mean sea level and is the datum of soundings on the Coast and Geodetic Survey charts for this region. The depth of water may accordingly be estimated by adding the tabular height of the tide to the soundings, unless a minus (–) sign is before the height, in which case it is to be subtracted. The annual inequality or variation in the mean sea level is included in the predictions.

Seriousness of Malaria.

The Chief Health Officer submits the following statement to the careful attention of all residents of the Canal Zone:

There have been several deaths recently from malarial fever, cases that have not come under the doctor's care until too late.

It can not be too strongly impressed that malaria is often a most serious and dangerous disease in this region, The Isthmus of Panama has always been the home of the pernicious form of malaria. With the freedom from disease we enjoy in the sanitated regions many grow careless, forget the grave danger all around, and uselessly expose themselves to infection in outside areas.

At present one of our residents is critically ill with pernicious malaria in Ancon Hospital. The infection is clearly traceable to an evening picnic party at Bella Vista beach where she was bitten by mosquitoes. Unfortunately, not sufficient attention was paid to the illness and several days elapsed after the first symptoms before a physician was consulted. If her life is saved it will be the result of expert and heroic treatment in Ancon Hospital.

In another recent case we are still acutely feeling the loss of a valued employee who was sick 5 days before calling a physician, entered the hospital too late, and died of pernicious malaria the following night.

The *anopheles* mosquitoes of this country are an infinitely greater source of danger than are its venomous snakes.

There are two morals to this sermon:

1. Do not expose yourself to be bitten by *anopheles* mosquitoes by remaining outside the sanitated areas after dusk.
2. When sick consult a physician promptly, even though you think yourself only trivially ill.

Calls of Official Automobile Transportation in Cristobal District.

In the furnishing of official jitney transportation in the Cristobal district it has heretofore been required that requests be made on the office of the district quartermaster. This has been changed, and calls should now be made direct to the office at the corral, telephone 19 or 33 Cristobal.

The above refers to calls from persons to whom authority to use official transportation has been issued. Requests for special service from persons not regularly authorized should be addressed to the office of the district quartermaster.

Meaning of "Metalled Roads" in Circular on Hunting.

In connection with the publication of circular No. 645-3, on areas in the Canal Zone in which hunting is allowed (page 67, this issue), the Chief of the Police and Fire Division calls attention to the meaning of "metalled roads," within 100 yards of which hunting is not allowed. The term includes all surfaced roads, and railroads, as distinguished from trails and unsurfaced roads.

Beekeeping in the Canal Zone.

The keeping of bees in the Canal Zone, using principally native swarms from queens imported from the United States, Cuba, and Porto Rico, has been found a profitable interest by residents of the Canal Zone, and the Supply Department of The Panama Canal has an apiary of 40 hives on Juan Mina plantation on the Chagres River. A check made by the police during August showed a total of 572 hives in the Canal Zone, distributed as follows: Cristobal, 46; Gatun, 10; Frijoles, 1; Gamboa, 50; Juan Mina, 40; Pedro Miguel, 118; Paraiso, 23; Rio Grande reservoir, 9; Empire, 70; Balboa, 171; Ancon, 34. The greatest number of hives owned by any individual was 72, at Balboa; the next greatest, 70, at Empire. The total number of owners was 43.

One of the keepers of bees, Mr. J. H. Poole, Box 164, Cristobal, has suggested the formation of a beekeepers' association on the Canal Zone for the interchange of experience and promotion of common interests. He invites those interested to write to him, as above, or telephone to him at his residence (call Cristobal 106).

Sunday Excursions to Taboga Island.

Excursions on Sundays to Hotel Aspinwall under the rate of $2.50 for transportation both ways, lunch, and dinner are increasingly popular. Last Sunday the hotel was practically filled to capacity. The launch leaves Balboa at 10 a. m. on Sundays and holidays.

Examinations for Clerks, Postal Clerks, and Stenographers and Typists, Panama Canal Service.

The United States Civil Service Commission announces the folowing examinations for the Panama Canal service on the dates given: Clerk, October 16, 1920; postal clerk, October 20; and stenographer and typist, October 23.

In the examination for clerks, accounting training and experience has been included as an optional subject, in addition to the former optional subjects of typewriting, bookkeeping, general business training and experience, and timekeeping training and experience. The usual entrance salary for clerk with accounting experience is $158 a month; for clerks qualifying in any of the other optional subjects, from $106 to $127 a month.

The postal clerk examination will be a second grade examination, as in the United States, instead of first grade, as previously on the Canal Zone. Entrance salary is $125 a month.

No changes have been made with respect to the stenographer and typist examination. The entrance salary is $137 a month.

Further information may be ascertained from announcement No. 484, posted in the Canal clubhouses and post offices, or from the local Civil Service Board at Balboa Heights (telephone 286, Balboa).

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights (telephone 286):

Assistant in federal grain supervision (male and female); $1,800 to $3,000 a year; No. 491; form 1312; age, 22 but not 50 years; vacancies in Bureau of Markets, Department of Agriculture; October 6, 1920.

Assistant testing engineer (male and female); $2,100 to $2,700 a year; No. 502; form 2118; age, 25 years and over; vacancies in Bureau of Public Roads, Department of Agriculture; October 19, 1920.*

Chief surveillance inspector, $3,200 to $4,000 a year; assistant chief surveillance inspector; $2,400 to $3,200 a year (male and female); No. 498; form 1312; age, 25 years and over; vacancies in Ordnance Department at Large; October 12, 1920.*

Cotton classer's helper; $900 to $1,440 a year (male); form 1312; age, 16 years but not 25 years; vacancies in the Bureau of Markets, Department of Agriculture; October 6, 1920.

Commercial telephone engineer (male and female); $3,000 to $4,000 a year; form 1312; age, within reasonable age limits; vacancies in the Signal Service at Large; October 12, 1920.*

Dairy manufacturing specialist (male and female); $2,200 to $3,200 a year; No. 298; form 2118; age, below 45 years; vacancies in the Dairy Division, Bureau of Animal Industry, Department of Agriculture; October 12, 1920.*

Die and tool maker (male and female); $5.50 per diem; No. 480; form 1800; age, 20 years and over; vacancy in the equipment shops, Post Office Department; September 28, 1920.*

File clerk (male and female); $900 to $1,200 a year; No. 497; form 1312; age, 18 years and over; vacancies in the Departmental Service; October 6 and December 8, 1920.

Grain sampler (male and female); $1,200 to $1,620 a year; No. 490; form 1312; age, 21 years but not 45 years; vacancies in the Bureau of Markets, Department of Agriculture; October 6, 1920.

Investigator in office management (male and female); Grade 1, $1,400 to $2,200 a year; Grade 2 $2,200 to $3,000 a year; Grade 3, $3,000 to $3,800 a year; No. 500; form 2118; age, within reasonable age limits; vacancies in the United States Bureau of Efficiency; October 12, 1920.*

Junior engineer and deck officer (male and female); $2,000 a year; No. 383-amended; form 1312; age, below 26 years; vacancies in the United States Coast and Geodetic Survey; October 6 and 7; December 8 and 9, 1920.

Junior physicist (male and female); $1,800 a year; No. 483; form 1312; age, below 40 years; vacancies in the Fixed Nitrogen Research Laboratory, American University, Washington, D. C., September 28, 1920.*

Laboratory assistant (male and female); senior grade, $1,320 to $1,500 a year; intermediate grade, $1,200 to $1,320 a year; junior grade, $1,080 to $1,200 a year; No. 505; form 1312; age, 18 years but not 35 years; vacancies in the Bureau of Mines, Department of the Interior; December 1, 1920.*

Laboratory helper; $900 to $1,080 a year; laboratory aid; $720 to $900 a year (male and female); form 1312; age, 18 years but not 35 years; vacancies in the Bureau of Mines, Department of the Interior; December 1, 1920.*

Law clerk (male and female); $2,000 a year; No. 496; form 1312; age, below 35 years; vacancies in the Department of State; October 6, 1920.

Master computer; $1,800 to $2,400 a year; computer, grade I, $1,400 to $1,800 a year; computer, grade II, $900 to $1,400 a year (male and female); No. 277-amended; form 1312; age, below 50 years; vacancies in the Ordnance Department at Large of the War Department; December 14, 1920.*

Multigraph operator (male and female); $1,000 to $1,100 a year; No. 482; form 304; age, 18 years and over; vacancy in Division of Publications, Department of Agriculture and in the office of the Comptroller of the Currency, Treasury Department; September 22 and November 3, 1920.

Oiler (male and female); $900 a year; No. 479-amended; form 1800; age, 18 years and over; vacancy in the Treasury Department, September 28, 1920.*

Passenger rate clerk; freight rate clerk (different services); No. 123-amended; amended to show examination closing date as August 31, 1920 instead of continuous nonassembled.

Railway mail clerk (male and female); $1,600 a year; No. 510; form 304; age, 18 years but not 35 years; vacancies in the Railway Mail Service; October 9, 1920.

Rural engineering draftsman (male and female); $1,800 to $2,200 a year; No. 501; form 1312; age, 22 years and over; vacancy in the Bureau of Public Roads, Department of Agriculture; October 12, 1920.*

Teacher (male and female); $760 a year; No. 499; form 1312; age, 20 years but not 50 years; vacancies in the Indian Service.†

Telegraph operator (male and female); $900 to $1,200 a year; No. 215-amended; forms 304 and 1140; age, 18 years and over; vacancy in the Bureau of Markets, Department of Agriculture at $1,000 to $1,600 a year; September 22, November 3, December 15, 1920.

Trained nurse (male and female); $1,710 to $2,000 a year; No. 1952-amended-supplemental; vacancies in the Indian and Public Health services and Federal Board for Vocational Education.†

Typewriter repairman (male and female); $1,200 to $1,400 a year; No. 481; form 304; age, 18 years and over; vacancies in the Departmental Service; September 28, 1920.*

*Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

†Nonassembled. Applications will be received at any time until further notice.

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Christopher Clinton...	25616	Barbados.....	Colon.....	R. & F. Agency.....	August 31, 1920.
William C. Mauldin...	1627	United States...	Pedro Miguel...	Electrical Division.....	February 13, 1920.
Joseph S. McCarthy..	3959	United States...	Colon Beach....	Cattle Industry.....	September 8, 1920.
Selvin Cumberbatch..	27874	Barbados.....	Colon.....	R. & F. Agency.....	August 23, 1920.
Melville Matthew.....	23754	St. Lucia.....	Camp Bierd.....	Coaling Plants.....	August 23, 1920.

Official Circulars.

Areas in Which Hunting is Allowed.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 1, 1920.

CIRCULAR No. 645-3:

1. Hunting with shotguns is permitted within the areas outside of townsites or within 100 yards of metalled roads, and except in the watershed reservations of Brazos Brook and Agua Clara reservoirs, on the east side of the Panama Canal and Panama Railroad north from the southern shore of Gatun River and Quebrancha arms of Gatun Lake including the islands of lake arms, north to the Atlantic Ocean; provided that no hunting *with the aid of dogs* will be permitted within the hunting area from the north shore of Gatun River and Quebrancha arms of Gatun Lake north to the Brazos Brook watershed reservations and line of intake tunnel from lake arm to Brazos Brook reservoir.

2. The use of firearms is prohibited in areas on the Canal Zone designated as playgrounds, such as Farfan Beach.

3. Circular No. 645-2, dated June 1, 1920, is amended accordingly.

CHESTER HARDING, *Governor.*

Appointments.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 3, 1920.

CIRCULAR No. 661-89:

Effective September 7, 1920, Judge James W. Blackburn is appointed Assistant District Attorney and will, during the absence on leave of Mr. Albert C. Hindman, District Attorney, perform the duties of that office.

Mr. Joseph J. McGuigan is appointed Magistrate, effective September 7, 1920, to fill the vacancy caused by the temporary appointment of Judge Blackburn to the above office.

CHESTER HARDING, *Governor.*

Telephone Rates.

THE PANAMA CANAL,
PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 26, 1920.

To all concerned—The following amendments are made to Departmental Tariff "A"—Schedule of rates for supplies and services furnished to departments and divisions of The Panama Canal, Panama Railroad, other departments of the United States Government, employees, and those entitled to employees' rates, except where otherwise specified:

CLASS IX. MISCELLANEOUS.
Item 9.
Telephones.
Effective September 1, 1920.

1. To departments and divisions of The Panama Canal:
   Pro rata of monthly charge of $7,500 against The Panama Canal on basis of the official telephones in use by the various departments.
2. To Panama Railroad, other departments of the Government, employees, and those entitled to employees' rates:

Office telephones	per month..	$7.00
Residence telephones	per month..	4.00
Extensions	per month..	2.00
Trunk lines	per month..	40.00

CHESTER HARDING,
Governor, The Panama Canal.
President, Panama Railroad Company.

Acting Office Engineer.

THE PANAMA CANAL,
DEPT. OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., September 3, 1920.

To all concerned—During the absence of Mr. C. J. Embree on leave, Mr. E. S. Randolph will act as office engineer, in addition to his other duties.

JAY J. MORROW,
Engineer of Maintenance.

Acting Chief Clerk.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 7, 1920.

To all concerned—Effective this date and during the absence of Mr. John H. Smith on leave, Mr. R. S. Erdman will be Acting Chief Clerk.

C. A. MCILVAINE,
Executive Secretary.

Approved:
CHESTER HARDING,
Governor.

Property Returns.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 2, 1920.

CIRCULAR NO. 255 (amending Auditor's circular No. 148):

To all concerned—In accordance with the Governor's circular No. 656-1, paragraph No. 17, the following change in accounting for property is authorized:

The property returns for the current period will not be closed as of September 30, but will be held open until December 31, 1920. In the future, beginning January 1, 1921, returns will cover periods of 12 months instead of 6 and will be opened as of January 1 and closed as of December 31 of each year.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
CHESTER HARDING,
Governor.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 11, 1920.

CIRCULAR NO. 256:

Effective September 1, 1920, Commander F. V. MacNair, U. S. N., is designated an accountable official of The Panama Canal, *vice* Capt. H. L. Eden, and as such will account for all nonexpendable property in use by the Captain of the Port, Cristobal.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
CHESTER HARDING,
Governor.

Opening of Public Schools.

THE PANAMA CANAL,
EXECUTIVE DEPARTMENT,
DIVISION OF SCHOOLS,
BALBOA HEIGHTS, C. Z., September 8, 1920.

To all concerned—The public schools of the Canal Zone will open on Monday, October 4, 1920.

All children residing in the Canal Zone, whether of employees or nonemployees, and children of American citizens residing in Panama or Colon are entitled to free school privileges. The children of employees not living in the Canal Zone and not citizens of the United States are not entitled to Canal Zone school privileges. No child will be admitted, however, who will not be 6 years old on or before February 1, 1921.

Schools for white children will be opened at the following places:

Balboa	Grades 1 to 12, inclusive
Ancon	Grades 1 to 8, inclusive
Pedro Miguel	Grades 1 to 7, inclusive
Gatun	Grades 1 to 8, inclusive
Cristobal (Colon Beach)	Grades 1 to 12, inclusive

The dividing line between the Ancon and Balboa school districts commences at the bachelor girls' quarters (house No. 203) and extends to the railroad tracks, passing between houses Nos. 592 and 593-X. Grade pupils who live in houses Nos. 569, 570, 571, 572, 574, 578, 592, and 592-X, and on the Ancon side of these houses, will attend the Ancon school; those who live in houses Nos. 201, 202, 576, 593 to 604, including 593-X, and on the Balboa side of these houses, will attend the Balboa school.

Pupils of grades 1 to 4, inclusive, residing at La Boca and on the Fort Amador side of the Balboa Road will report to the school at Balboa lodge hall. Other pupils of these grades residing in proximity to this school may report there and will be temporarily assigned according to accommodations available.

Pupils who live in Corozal will attend the Balboa school.

Pupils of grades 1 to 7, inclusive, who live in Paraiso and on the west side of the Canal will attend the Pedro Miguel school. Pupils above grade 7 will attend the Balboa school.

Grade pupils who live between Gatun and New Culebra will attend the Gatun school.

Pupils living in Cristobal will take the train to the Washington Hotel leaving the commissary at 8.36 a. m., and return on the train leaving the Washington Hotel at 3.30 p. m.

Pupils in all schools remaining at school during the noon hour will be under the supervision of a teacher.

White schools will open and close according to the following schedule:

	A. M.	P. M.
Balboa High	8.00–11.30	1.00–3.30
Balboa elementary	8.00–11.30	1.00–2.30
Ancon	8.00–11.30	1.00–2.30
Pedro Miguel	8.00–11.30	1.00–2.30
Gatun	8.00–11.30	1.00–2.30
Cristobal elementary	9.00–12.00	*1.00–3.00
Cristobal high	9.00–12.00	1.00–4.00

Wherever practicable, the first grade in all white schools will dismiss 30 minutes earlier than the other grades, and the second grade 15 minutes earlier, both morning and afternoon.

Schools for colored children will open at La Boca, Pedro Miguel, Paraiso, Empire, Gatun, and Cristobal. The sessions will be from 8 to 11 a. m., and 1 to 3 p. m.

The above schedules are subject to such changes as conditions may warrant.

Requests should be made to this office immediately for necessary railroad transportation.

Parents of pupils attending the Canal Zone schools for the first time should prepare the following information and give the slip of paper containing the same to the pupils to hand to the teachers on the first day of school: (1) Pupil's name; (2) place and date of birth; (3) date of arrival on the Isthmus; (4) city or town, and State in which pupil attended school, if pupil has previously attended school; (5) and name, check number, occupation, and address of parent or guardian. Pupils who have attended schools in the States should, if possible, submit their report cards from such schools.

A. R. LANG,
Superintendent of Schools.

Approved:
C. A. MCILVAINE,
Executive Secretary.

Sale of Brown Hoist at Cristobal.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., October 30, 1920, and then opened, for the purchase of a "Fast Plant" for handling coal and general merchandise, manufactured by the Brown Hoisting Machinery Company, Cleveland, Ohio. This plant has been used by the Panama Railroad Company at Cristobal for handling coal since 1906, and is now located at dock 14, Cristobal, C. Z. The plant is no longer required and bids are solicited for the entire hoisting plant, including all parts above the rails on which it now stands, together with all spare parts now on hand which were purchased for use on this plant. Detailed description and form of proposal may be had upon application to the office of the Chief Quartermaster. The Panama Canal reserves the right to reject any or all bids.

August Rainfall for Three Years.

Stations.	INCHES. 1918	1919	1920	Station average.	Years of record.	Rainy days, 1920.
Pacific section—						
Balboa	3.75	5.96	11.48	7.72	22	19
Balboa Heights	3.84	5.82	12.22	7.91	23	19
Miraflores	5.70	4.02	9.31	8.25	12	26
Pedro Miguel	4.41	7.61	7.62	8.22	13	26
Rio Grande	5.52	9.95	7.05	9.29	16	23
Central section—						
Culebra	4.91	8.58	9.51	9.98	29	22
Camacho	6.81	8.63	7.95	9.33	15	23
Empire	5.18	8.49	10.01	9.17	17	25
Gamboa	8.59	7.37	8.97	11.70	38	26
Juan Mina	11.36	9.32	13.01	11.77	10	28
Alhajuela	9.16	8.11	14.17	13.89	22	26
Vigia	10.25	7.82	12.43	12.25	12	29
Frijoles	8.91	10.19	12.67	10.22	9	27
Trinidad	5.81	6.78	10.82	10.25	13	22
Monte Lirio	11.82	10.17	14.27	11.92	13	29
Atlantic section—						
Gatun	17.95	9.07	15.23	14.07	16	28
Brazos Brook	19.20	11.10	23.47	15.05	15	29
Colon	18.85	6.77	23.04	15.00	50	28
Porto Bello	.....	17.76	27.45	20.01	9	30
Bocas del Toro	13.83	17.54	20.93	11.94	12	25

Rainfall from August 1 to August 31, 1920, Inclusive.

STATIONS.	Maximum in 1 day.	Date.	Total.
Pacific section—	*Ins.*		*Ins.*
Balboa	2.51	27	11.48
Balboa Heights	2.93	27	12.22
Miraflores	1.41	27	9.31
Pedro Miguel	1.19	16	7.62
Rio Grande	1.22	16	7.05
Central section—			
*Culebra	1.23	6	9.51
*Camacho	1.42	3	7.95
Empire	1.24	18	10.01
Gamboa	1.29	3	8.97
*Juan Mina	2.73	31	13.01
Alhajuela	3.26	18	14.17
*Vigia	2.19	31	12.43
*Darien	3.50	29	12.67
*Trinidad	3.58	7	10.82
*Monte Lirio	1.93	9	14.27
Atlantic section—			
Gatun	1.49	14	15.23
*Brazos Brook	2.89	15	23.47
Colon	4.97	15	23.04
†Bocas del Toro	2.21	7	20.93
Porto Bello	8.57	19	27.45

*Standard rain gauge—readings at 5 p. m. daily.

Automatic rain gauge at unstarred stations—values, midnight to midnight.

†Standard rain gauge—readings at 8 a. m. daily.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., September 7, 1920.

The following insufficiently addressed mail matter has been received in the office of the Director of Posts and may be obtained upon request of the addressees. Request for forwarding may be made by telephone, calling No. 182, Balboa:

Bedore, Phillip
Bland, S. L.
Clark, Mr. and Mrs. Geo., Box 525
Dayton, Geo. W.
Denone, P. F.
Forbes, Joe
Hale, Duke
Hampton, Jim
Harris, Mrs. Wm.
Holland, Miss Helen
King, Paul
Kirchheiner, H. E., Box 144
Leighton, Mrs. Harry
McGivney, Thos. A.
Mowatt, Vivia
Phillips, Mrs. Ethel
*Ritchie, Katherine, Box 46
Teszinske, Adoph
Tobin, Mrs. M. J., Box 363

*Circular

Additions to Commissary Stock.

Dry Goods Section.

Acid, boric (powder), 12-oz. bot	$0.28
Brushes, hair, Prophylactic, ea	.51
Brushes, hair, Prophylactic, ea	.90
Cream, cold, face, Mavis, tube	.23
Curtain drapery, No. 28, yd	.29
Lavender water, P. C., bot	.30
Nightgowns, ladies', Philippine embroidered, ea	4.45
Pants, work, blue check, pr	3.40
Shirts, negligee, with cuffs attached, Prin. percale, ea	1.85
Shirts, negligee, with soft cuffs, white, Madras, ea	2.55
Shirts, negligee, with soft cuffs, colored, ea	2.10
Tonic, scalp, antiseptic, P. C., bot	.25

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Current Net Prices on Coal, Fuel Oil, and Beef.

Coal is being supplied to steamships including warships of all nations delivered and trimmed in bunkers, at $15.00 per ton of 2,240 pounds at Cristobal and $17.00 at Balboa. For ships in transit through the Canal, which are directed to take coal at Balboa, for the convenience of The Panama Canal, $15.00 per ton at Balboa. For ships taking less than car load lots from plants or less than 25 tons from lighters, the price is $16.50 per ton at Cristobal, $18.50 at Balboa.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa for $3.50 per barrel of 42 gallons.

Diesel oil is not sold by The Panama Canal, but may be obtained from private concerns at approximately $4.50 per barrel. Cable arrangements should be made in advance of arrival of vessel.

The following are current prices on fresh beef sold from the cold storage plant of the Canal. Prices quoted are United States currency, per pound net:

Beef hinds, 21 cents; beef fores, 16 cents, beef ribs, entire set, 23 cents; short loins, 29 cents. This beef is from Colombian cattle slaughtered on the Isthmus.

Postal Address of The Panama Canal.

The postal address is, The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

Locations of Patients, and Visiting Hours, at Ancon Hospital.

The following table shows the distribution of patients in the new Ancon Hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Present number of beds.	Visiting hours.
Section "A"—White American, male:		Tuesdays, Thursdays, and Saturdays, 2 to 4.30 p. m. Sundays and holidays, 9.30 to 11 a. m. and 2.30 to 4.30 p. m.
Ward No. 1, Medical, Eye and Ear	44	
Ward No. 2, Medical, Eye and Ear	41	
Ward No. 3, Surgical	44	
Ward No. 4, Surgical	41	
Cells (2)	2	
	172	
Section "B":		
White American, female	23	Daily except Sunday 2 to 4.30 p. m.; 6.30 to 8 p. m. Sundays and holidays, 10 to 11 a. m.; 2 to 4.30 p. m. 6.30 to 8 p. m.
White foreign, female	15	
Nursery	16	No visitors permitted.
Private Rooms, (40)	46	Daily, 9.30 to 11 a. m.; 2 to 4.30 p. m.; 6.30 to 8 p. m.
Cells (2)	2	
	102	
Section "C":		
Ward No. 9, White foreign, male	39	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 10, Colored, eye and ear, convalescent medical	39	
Ward No. 11, Colored Acute surgical	39	
Ward No. 12, Colored Acute medical	39	
Ward No. 13, Colored Convalescent surgical	39	
Ward No. 14, Colored Convalescent surgical	39	
Cells (6)	6	
Rooms (7)	7	
	247	
Section "D":		
Ward No. 15	41	
Ward No. 16	39	
Ward No. 17, Colored children	32	Wednesdays Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 18, White children	30	Daily, 9.30 to 10 a. m.; 2 to 4 p. m.
Ward No. 19, Colored female medical	41	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 20, Colored female surgical	34	
Rooms (6)	6	
Cells (6)	6	
	229	
Isolation:		No visitors permitted.
Floor No. 1	14	
Floor No. 2	29	
Floor No. 3	28	
Floor No. 4	28	
	99	
Total number of beds	849	

Emergency passes are issued only by and in the discretion of the section nurse.

Schedule of Official Jitney Service.

Following is the schedule of the official jitney plying between Balboa shops and the Ancon police station, carrying employees in the conduct of official business, upon presentation of passes issued by the Chief Quartermaster or of the "special pass" issued by the Governor:

FROM ANCON POLICE STATION TO BALBOA SHOPS.

Police Station	Leave on the hour and half hour.
Administration Building	Leave 7 minutes and 37 minutes after the hour.
Balboa Commissary	Leave 10 minutes and 40 minutes after the hour.
Balboa shops	Arrive 15 minutes and 45 minutes after the hour.

FROM BALBOA SHOPS TO ANCON POLICE STATION.

Balboa Shops	Leave 15 minutes and 45 minutes after the hour.
Port Captain's Office	Leave 18 minutes and 45 minutes after the hour.
Balboa Commissary	Leave 20 minutes and 50 minutes after the hour.
Administration Building	Leave 25 minutes and 55 minutes after the hour.
Ancon Police Station	Arrive on the hour and half hour.

COMMISSARY NOTES.

Books.

There is now on sale in all commissaries a book on "Domestic Science—Principles and Applications," by Bailey, selling at $1.30 each.

Lace.

The Commissary Division has just received a large assortment of laces in various widths and patterns, ranging in prices from 4 to 23 cents the yard.

Toilet Water.

Another new product recently added to stock is lavender water at 30 cents for a 12-ounce bottle, with 3 cents refund for return of bottle. This may be used after shaving, for sprinkling in dry closets, for perspiration, in fact, for any purpose a toilet water is used.

Boric Acid.

Boric acid, packed by the industrial laboratory, has recently been added to stock. This is excellent as a dusting powder for babies, and also as an eye, ear, mouth, and wound wash, and as a spray for the throat and nose. This preparation may be obtained in the commissaries at 28 cents for a 12-ounce bottle.

Madras.

A new assortment of men's Madras shirtings in plain colors, white ground and colored stripes has been received and is now on sale in all commissaries, ranging in prices from 61 to 71 cents a yard. There is also a line of Madras suitable for children's dresses at 42 cents a yard.

Care of Milk or Cream Receptacles.

The attention of commissary patrons is called to Section No. 1 of Board of Health Ordinance No. 8, reading as follows:

"1. It shall be the duty of every person having in his possession bottles, cans, or other receptacles containing milk or cream, which are used in the transportation or delivery of milk or cream, to clean or cause them to be cleaned immediately upon emptying; and no person shall receive or have in his possession any such receptacle which has not been washed after holding milk or cream, or which is unclean in any way."

Wagon men and others who receive empty milk bottles have been instructed to accept only those that have been properly cleaned, in accordance with this ordinance.

PANAMA RAILROAD PASSENGER TRAIN TIME-TABLE No. 30, EFFECTIVE DECEMBER 26, 1919.

MAIN LINE STATIONS.	DAILY.			Daily except Sat'day	Sat'day only.	Sunday only.
	3	5	7	101	9	11
Leave	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.
Colon	7.10	11.00	5.00	11.15	11.30	9.35
Mount Hope	7.15	11.05	5.05	11.20	11.35	9.40
New Gatun	.....	.....	.....	11.28	11.45	.....
Gatun	7.27	11.17	5.17	11.40	11.49	9.52
					A. M.	
Monte Lirio	7.42	11.32	5.32	11.55	12.04	10.07
				A. M.		
Frijoles	7.53	11.43	5.43	f12.10	12.15	10.18
Darien	8.00	11.50	5.50	f12.18	12.22	10.25
		P. M.				
Gamboa	8.14	12.02	6.02	12.30	12.33	10 37
Summit	8.30	12.14	6.14	f12.42	12.45	10 49
Pedro Miguel	8.44	12.26	6.24	1.00	12.57	11 01
Red Tank	.....	.....	6.26	.....	1.00	11 04
Miraflores Locks	8.50	12.32	6.30	f1.06	1.05	11 09
Corozal	8.54	12.36	6.34	f1.10	1.10	11 14
Balboa Heights	9.00	12.45	6.40	1.15	1.15	11 20
Panama	9.05	12.50	6.45	1.20	1.20	11.25
Arrive	A. M.	P. M.	P. M.	A. M.	A. M.	P. M.
	3	5	7	101	9	11

MAIN LINE STATIONS.	DAILY.			Sat'day only.	Sunday only.
	4	6	8	10	12
Leave	A. M.	A. M.	P. M.	P. M.	P. M.
Panama	7.10	11.00	5.00	11.30	9.35
Balboa Heights	7.15	11.05	5.05	11.35	9.40
Corozal	7.21	11.12	5.10	11.41	9.46
Miraflores Locks	7.26	11.17	5.15	11.46	9.51
Red Tank	7.30	.....	5.19	11.49	9.54
Pedro Miguel	7.34	11.23	5.23	11.53	9.58
				A. M.	
Summit	7.46	11.35	5.35	12.05	10.10
Gamboa	7.58	11.47	5.47	12.17	10.22
Darien	8.07	11.57	5.57	12.28	10.32
		P. M.			
Frijoles	8.14	12.04	6.04	12.35	10.39
Monte Lirio	8.25	12.15	6.15	12.46	10.50
Gatun	8.40	12.30	6.30	1.01	11.05
New Gatun	.....	.....	.....	.....	.....
Mount Hope	8.50	12.40	6.40	1.10	11.15
Colon	8.55	12 45	6.45	1.15	11.20
Arrive	A. M.	P. M.	P. M.	A. M.	P. M.
	4	6	8	10	12

All trains stop where time is shown except f indicates stop on signal only.

		Sund'y only.	Daily except Sat'y	DAILY.				
		43	41	39	37	35	33	31
		A. M.	P. M.	P. M.	P. M.	P. M.	A. M.	A. M.
.....	.....	12.30	11.30	7.00	4.55	1.35	9.25	6.45
.....	.....	12.35	11.35	7.05	5.00	1.40	9.30	6.55
.....	.....	12.45	11.47	7.13	5.13	1.53	9.43	7.07
.....	.....	12.50	11.50	7.21	5.16	1.56	9.46	7.11
.....	.....	.....	11.53	7.24	5.19	1.59	9.49	7.14
.....	.....	s12.56	f11.57	7.28	5.23	2.03	9.53	7.19
			A. M.					
.....	.....	1.00	f12.01	7.33	5.28	2.08	9.58	7.24
.....	.....	1.05	12.09	7.40	5.35	2.15	10.05	7.30
.....	.....	1.10	12.15	7.45	5.40	2.20	10.10	7.35
.....	.....	A.M.	A.M.	P. M.	P. M.	P. M.	A.M.	A.M.
		43	41	39	37	35	33	31

LAS CASCADAS BRANCH STATIONS.	DAILY.					Daily except Sat'y.	Sat'y. only.		
	29	32	34	36	38	40	42		
Leave **Arrive**	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	A. M.	.....	.....
Empire	6.25	9.10	12.55	4.00	6.50	11.23	12.23	.....	.....
Culebra	6.15	9.05	12.50	3.55	6.45	11.19	12.20	.....	.....
Paraiso	6.00	8.51	12.35	3.41	6.31	11.06	12.07	.....	.....
Pedro Miguel	5.56	8.48	12.32	3.38	6.28	11.03	12.04	.....	.....
Red Tank	.....	8.45	12.29	3.35	6.25	11.00	12 01	.....	.....
							A.M.		
Miraflores Locks	5.49	8.41	12.25	3.31	6.21	10.56	11.56	.....	.....
Corozal	5.44	8.36	12.21	3.26	6.16	10.51	11.51	.....	.....
Balboa Heights	5.35	8.30	12.15	3.20	6.10	10.45	11.45	.....	.....
Panama	5.30	8.25	12.10	3.15	6.05	10.40	11.40	.....	.....
Arrive **Leave**	A.M.	A.M.	P.M.	P.M.	P.M.	P.M.	P.M.	.....	.....
	30	32	34	36	38	40	42		

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates domestic, $1.00 per year; foreign, $1.50; address The Panama Canal Record, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

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Volume XIV. Balboa Heights, C. Z., September 22, 1920. No. 6.

Cofferdam on Steamship "Bonham."

The Cristobal shops are now repairing the stern tube of the steamship *Bonham* by the use of a cofferdam. This cofferdam had to be built especially for this job and required the making of a mold of the ship's stern with the aid of a diver. The cofferdam is 16 by 18 by 22 feet high, was built in the Cristobal shop yards, and handled into the water by the use of the derrick barge. Difficulty was encountered in getting this cofferdam under the ship's stern on account of insufficient water in the dry-dock slip. This was finally accomplished by tilting the cofferdam. The cofferdam was secured in place, pumping started on the afternoon of September 19, and men were able to go to work on the propeller on Monday, September 20. The cofferdam extends from the rudderpost to 16 feet along the ship's stern. When the cofferdam was pumped out it raised the ship approximately 8 inches at the stern.

This method of removing the propeller and rewooding the stern bushing was undertaken when it was ascertained that no dry dock would be available for this ship for approximately 1 month, and the operation will save the operators a considerable amount, in that no tolls will have to be paid by this ship back and forth through the Canal and in avoiding the delay while waiting for the docking.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending September 18, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Caribbean	Panama Railroad Cattle Industry.		September 12.		1
Ulua	United Fruit Co	September 12.	September 12.	100	(2)
City of Para	Pacific Mail Steamship Line		September 14.		2,687
Urubamba	Peruvian Line	September 12.		3,233	
Aysen	Chilean Steamship Co	September 12.	September 15.	642	510
Jamaica	Pacific Steam Navigation Co	September 12.	September 16.	434	910
Toloa	United Fruit Co	September 13.	September 14.	1,084	6
Point Adams	Pacific Mail Steamship Line	September 13	September 15.	494	7
Heredia	United Fruit Co	September 13.	September 16.	1,354	1,929
H. F. Hodges	Panama Railroad Steamship Line	September 13.		299	
Glenpool	Standard Oil Co	September 14.	September 16.	7,857	(2)
Pennsylvania	Texas Oil Co	September 14.	September 18.	9,000	(2)
Rosana	A. Fait	September 15.		218	
Metapan	United Fruit Co	September 15.	September 15.	1	28
Carrillo	United Fruit Co	September 15.	September 16.	21½	140½
Caribbean	Panama Railroad Cattle Industry.	September 16		212	
Laura C. Hall	Pacific Metals Corporation	September 16.		6	
Cristobal	Panama Railroad Steamship Line		September 17.		5,367
Cuba	Pacific Mail Steamship Co	September 16.	September 17.	(1)	6
Manuel Calvo	Spanish Line	September 17.		513	
San Juan	Pacific Mail Steamship Line	September 18.		499	
Acajutla	Pacific Steam Navigation Co	September 18.		77	
Architect	Harrison Line	September 17.		831	

(1) No cargo discharged. (2) No cargo laded.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, Pancanal, Washington."

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight September 18, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship	Arrived at port		Entered Canal		Completed transit		Cleared for sea		Nationality	Line	Length	Beam	Salt water draft	From—	For—	Cargo		Panama Canal tonnage	
	Day	Hour	Day	Hour	Day	Hour	Day	Hour								Nature	Tons	Gross	Net
John W. Wells [1]	5	15.55	12	6.35	12	20.26	14	21.33	American...	Pacific Freighters	267.8	47.0	15.0	Ipswich	Puget Sound	Ballast	.....	2,559	2,353
Kingfisher [2]	8-24	17.35	12	7.05	12	15.20	12	16.45	American...	United States Navy	181.0	35.7	13.0	Norfolk	San Diego	.....	.....	.....	.....
India [3]	3	16.10	12	6.30	12	16.40	12	18.21	Panaman...	Albol Mora	34.4	9.3	2.0	Colon	Panama	Ballast	.....	8	8
Gothic Prince	12	19.40	13	6.20	13	15.24	13	16.29	British...	Prince Line, Ltd	448.0	57.0	27.0	New York	Far East	General, case oil	8,800	8,648	6,232
Juneau	12	21.20	13	6.42	13	15.47	15	13.35	American...	Alaska Steamship Co	244.0	42.3	19.0	Jucaro	Vancouver	Sugar	2,867	2,544	1,927
Ullstad	13	6.58	13	8.55	13	16.28	13	19.00	Norwegian..	Grefstad Rederi	350.0	50.8	15.0	Liverpool	Balboa [5]	Ballast	.....	4,813	3,374
Glenshane	13	12.15	13	12.45	13	21.55	14	8.01	British...	Glen Line, Ltd	412.0	55.8	23.0	London	Yokohama	General	8,273	6,596	4,602
City of Para	6	17.00	14	6.26	14	13.45	14	22.35	American...	Pacific Mail Steamship Co	345.0	38.6	23.3	Cristobal	San Francisco	General	4,680	3,739	2,459
Surrey	14	9.40	14	10.00	14	17.31	14	18.35	British...	Federal Steam Navigation Co	460.0	62.9	28.6	New York	Wellington	General	10,672	10,000	7,285
Suruga	13	21.19	14	10.55	14	18.26	14	20.05	American...	Barber Steamship Co	375.3	52.0	23.8	New York	Manila	General	6,545	5,137	3,812
Point Adams	13	11.48	15	6.05	15	14.05	15	17.45	American...	Pacific Mail Steamship Co	289.0	44.0	20.6	Baltimore	San Francisco	General	2,931	2,895	1,967
Santa Luisa	14	13.30	15	6.09	15	13.41	15	14.23	American...	W. R. Grace & Co	360.0	51.6	23.3	New York	Valparaiso	General	3,170	5,694	3,975
Gorbea Mendi	14	17.35	15	6.20	15	14.59	15	16.05	Spanish...	Sota y Aznar	365.0	50.2	13.1	Sagunto, Spain	Arica	Ballast	.....	4,614	3,250
Bradford	15	1.10	15	6.52	15	17.12	.....	.....	American...	Standard Oil Co	426.9	54.6	28.0	Point Lobos	Pisagua	Crude oil	8,000	7,318	5,458
Texas	15	7.45	15	9.03	15	17.44	15	18.57	Dutch...	United Steamship Co	364.0	48.5	23.6	Norfolk	Arica	Coal	5,707	4,817	2,515
Aysen	13	18.30	15	9.20	15	16.38	15	23.23	Chilean...	South American Steamship Line	379.0	44.3	21.6	Cristobal	Valparaiso	General	510	4,535	3,068
Admiral Wainwright	15	10.55	15	11.35	15	19.43	16	19.13	American...	Dollar Steamship Co	221.5	40.0	18.5	Galveston	Ocean Falls	Sulphur	2,200	1,855	1,262
Gen. H. F. Hodges	13	22.25	16	6.07	16	14.10	.....	.....	American...	Panama Railroad Steamship Line	323.0	39.0	12.6	New York	Balboa	Ballast	.....	2,855	1,832
Jamaica	12	19.00	16	6.10	16	14.15	16	16.25	British...	Pacific Steam Navigation Co	220.0	34.0	13.7	Cristobal	Tumaco	General	906	1,187	622
Orani	15	15.02	16	6.17	16	15.50	16	16.54	American...	Williams, Dimond & Co. (S. B.)	402.0	53.1	19.1	New York	Seattle	General	4,318	6,577	4,954
Tonstad	15	12.33	16	6.19	16	15.54	16	16.55	Norwegian..	Grefstad Rederi	376.2	48.0	14.6	Newcastle, Eng	Caleta Buena	Ballast	.....	4,550	3,339
Broad Arrow	15	17.46	16	6.25	16	16.03	16	16.57	American...	Standard Transportation Co	467.6	62.7	27.0	Sabina	Nagasaki	Kerosene	11,260	9,933	7,075
S. V. Harkness	16	5.30	16	7.05	16	17.00	16	23.06	American...	Standard Oil Co	435.0	57.0	26.5	Tampico	Pisagua	Crude oil	8,856	7,443	5,545
Orator	15	22.22	16	8.40	16	18.02	16	19.27	British...	Harrison Line	385.5	52.0	20.0	Liverpool	Los Angeles	[6]	5,000	5,178	3,870
Port Victor	15	22.55	16	9.42	16	18.40	16	20.24	British...	Commonwealth and Dom. Line	470.0	63.0	28.6	Liverpool	Dunedin	General	9,668	9,336	6,682
Charlton Hall	16	6.15	16	12.09	16	19.46	16	21.15	American...	United States Steel Products Co.	400.0	50.0	27.1	New York	Coronel	General	6,776	5,696	4,267
California [4]	16	17.29	17	6.25	17	13.58	17	15.08	Danish...	United Steamship Co	393.7	52.6	26.1	Norfolk	Antofagasta	Coal	7,564	6,707	4,934
Ortega	16	17.05	17	6.53	17	14.55	17	17.07	British...	Pacific Steam Navigation Co	465.0	56.0	23.9	Liverpool	Valparaiso	General	3,085	3,345	4,998
Lake Ellicott	15	14.48	17	9.10	17	16.28	17	22.21	American...	N. O. & S. A. S. S. Line (S. B.)	253.0	43.0	18.0	New Orleans	Valparaiso	General	1,500	2,920	1,973
Guadiamar	17	12.18	17	12.48	17	21.12	17	22.21	Spanish...	Naviera Guadelquiera	350.0	43.0	14.5	Gibraltar	Arica	Ballast	.....	3,926	2,737
City of Edinburgh	17	15.45	18	6.25	18	13.27	19	22.40	British...	Ellerman City Line	459.0	52.5	25.0	New York	Adelaide	General	6,800	.....	.....
Steel Maker	18	6.48	18	7.30	18	14.48	19	13.25	American...	United States Steel Products Co.	395.5	55.0	27.6	New York	Vancouver	Steel, general	8,700	7,285	5,256
Caddo	18	7.05	18	7.39	18	15.21	18	20.32	American...	Standard Oil Co	414.3	55.0	29.0	Tampico	Pisagua	Crude oil	8,000	6,438	4,391
Witram	18	6.35	18	8.52	18	16.45	18	18.15	British...	Ministry of Shipping	438.0	57.0	16.0	Newcastle	Portland	Ballast	.....	7,461	5,088

(1) Bark. (2) Mine sweeper, towing barge No. 24. (3) Launch. (4) Motor ship. (5) For orders. (6) Pig iron, chalk, and general.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Pakcha	11	13.30	12	6.49	12	13.58	12	13.58	British	Shaw, Savill & Albion Co.	477.5	63.1	26.2	Sydney	London	Frozen, general	7,335	10,995	8,173
Astmacho III	2	13.00	12	7.10	12	16.00	12	16.08	American	Astoria Mahogany Co.	265.0	42.5	13.0	Balboa	New York	Ballast		2,425	1,729
Bogota	11	22.15	12	8.13	12	15.25	12	17.05	British	Pacific Steam Navigation Co.	400.0	52.4	22.0	Valparaiso	Liverpool	(13)	4,500	5,733	4,015
Oak Branch	12	3.00	12	8.22	12	16.50	12	20.05	British	F. & W. Ritson	385.0	49.8	23.1	Talcahuano	Liverpool	(14)	6,461	5,188	4,105
Bath	11	23.05	12	8.28	12	17.30	14	20.05	American	United States Navy	344.0	46.0	14.6	Seattle	Hampton R'ds	Gen., for Navy	278	3,945	2,564
Lake Elkwater	11	7.30	12	9.28	12	17.45	12	18.50	American	Amer. Metals Transp. Co. (S.B.)	253.4	43.6	22.6	Honolulu	Boston	Can'd pineap'les	3,455	2,940	1,976
Aysen	12	5.00	12	9.39	12	18.30	15	9.20	Chilean	South American Steamship Co.	379.6	44.3	18.6	Valparaiso	Cristobal	General	642¼	4,535	3,068
Delisle	12	8.20	12	10.14	12	20.00	13	15.55	American	McCormack & McPherson (S.B.)	320.7	46.0	22.0	Antofagasta	Cristobal (5)	Nitrates	4,450	3,803	2,350
Jamaica	12	8.00	12	10.37	12	19.00	16	6.10	British	Pacific Steam Navigation Co.	220.0	34.0	12.5	Tumaco	Cristobal	General	434	1,187	622
Haymon	11	20.30	12	12.42	12	20.30	12	22.50	American	Col. Pacific Steamship Co. (S. B.)	402.5	53.0	26.6	Tacoma	New York	Flour	8,500	6,525	4,756
Lisbon Maru	12	12.30	12	13.37	12	21.25	12	23.00	Japanese	Nippon Yusen Kaisha	445.0	58.0	19.6	Yokohama	New York	General	8,272	7,608	5,479
Urubamba	12	4.15	12	14.30	12	22.14	20	6.00	Peruvian	Peruvian Line	381.2	45.9	22.0	Callao	Cristobal	General	3,233	4,803	2,951
Renown (7)	13	6.00	13	6.58	13	15.45	14	7.01	British	British Navy	795.0	92.0	31.0	Honolulu	United King.				32,000
Radnor	13	7.30	13	8.29	13	16.55	14	8.10	American	Barber S. S. Line, Inc. (S. B.)	434.3	57.7	26.0	Manila	New York	(15)	10,004	7,993	5,871
Hattie Luckenbach	13	12.01	13	9.31	13	17.30	13	17.40	American	Luckenbach Line	331.5	47.0	23.0	San Francisco	New York	General	3,800	4,708	3,768
Hororata	13	10.30	13	11.25	13	19.30	14	13.50	British	New Zealand Shipping Co.	511.1	64.2	27.6	Melbourne	New York	Frozen, general	5,562	12,623	8,598
Benjamin Brewster	12	17.05	13	15.00	13	22.25	14	4.45	American	Standard Oil Co. of N. J.	411.6	53.4	22.0	Iquique	Tampico	Ballast		6,360	4,337
Lake Fitch	13	16.40	14	6.46	14	14.00	14	15.00	American	Wessel Duval & Co. (S. B.)	253.4	43.8	21.2	Antofagasta	Wilmington	Nitrates	3,311	2,939	2,017
Santa Rosa	14	3.00	14	7.45	14	15.00	14	21.25	American	W. R. Grace & Co.	404.6	53.9	28.1	Puntarenas	Cristobal (5)	(16)	8,700	6,744	4,804
Grelcaldy	14	4.30	14	8.39	14	16.35	14	17.35	British	Gould Steamship Industrial Ltd.	380.0	51.0	24.0	Iquique	Dunkirk	Nitrates	6,902	5,296	3,935
Fargo	13	15.00	14	9.50	14	17.23	15	1.20	American	Paragon Shipping Co. (S. B.)	251.0	43.6	23.0	Iquique	Baltimore	Nitrates	3,486	2,857	1,782
Coutolene	14	10.15	14	11.03	14	18.55	14	21.15	American	Hasler Brothers (S. B.)	253.4	43.7	23.0	Tocopilla	Jacksonville	Nitrates	3,660	2,828	1,747
Rosana (8)	14	2.00	15	7.07	15	15.52	19	6.07	Costa Rican	Alberto Fait & Co.	107.7	25.0	8.0	Puntarenas	Cristobal	Logs, and general	220	256	185
Santa Ana	14	19.30	15	7.52	15	13.55	15	15.48	American	W. R. Grace & Co.	360.2	51.6	20.6	Valparaiso	New York	(17)	1,725	5,842	4,150
Dillwyn	15	1.55	15	8.10	15	16.15	15	23.30	American	Standard Oil Co. (S. B.)	435.0	56.0	26.0	San Francisco	Philadelphia	Lubricating oil	9,410	7,602	5,341
Gov. John Lind	14	12.00	15	8.24	15	16.12	15	22.45	American	Lind Navigation Co. (S. B.)	305.0	46.0	22.6	Iquique	Jacksonville	Nitrates	4,347	3,643	2,184
La Habra	15	3.30	15	8.33	15	16.35	15	18.22	Norwegian	W. Wilhelmsen	424.8	57.0	18.6	Tocopilla	Tampico	Ballast		7,053	5,093
Duquesne	14	19.30	15	9.30	15	19.10	16	7.30	American	Barber & Co. (S. B.)	394.8	55.0	27.0	Yokohama	New Orleans	(18)	8,500	7,285	5,346
Corapeak	15	12.00	15	13.51	15	22.22	16	1.42	American	Atlantic Chartering Co. (S. B.)	251.0	43.6	20.0	Iquique	Norfolk	Nitrate of potash	2,808	2,249	1,464
Laura C. Hall (8)	15	15.00	16	7.41	16	15.45	20	6.58	British	Pacific Metals Corporation	81.0	25.6	9.1	Buenaventura	Cristobal	(19)	42	130	69
Garfield	16	1.30	16	7.50	16	15.05	16	18.35	American	W. R. Grace & Co.	300.0	45.2	20.9	Salaverry	New York	General	3,390	3,235	2,015
Trelissick	16	3.00	16	7.59	16	15.55	16	23.20	British	Edw. Hain & Son	400.9	52.3	24.4	Portland	Cape Town	Wheat and flour	6,323	5,789	4,082
Fortol (9)	15	22.00	16	8.18	16	16.10	18	3.52	British	British Admiralty	320.0	41.6	19.0	Acapulco	Trinidad	Ballast		2,780	1,108
St. Mabyn (10)	16	4.00	16	9.51	16	21.15			British	British Admiralty	135.0	29.0	14.4	Mejillones	Cristobal (5)	Ballast		452	115
Ramses	16	4.00	16	10.20	17	10.10			German	Kosmos Co.	470.5	60.8	22.6	Caleta Colosa	Europe	Nitrates	7,900		
Cuba	16	12.00	16	12.41	16	20.10	17	16.10	American	Pacific Mail Steamship Co.	307.7	42.2	20.0	San Francisco	New York	Can'd pineap'les	2,405	3,429	2,206
Mina Brea	12	18.00	16	14.50	17	11.05	17	21.20	British	International Petroleum Co.	360.3	49.2	16.0	Antofagasta	Tampico	Ballast		4,337	2,688
Gottingen (11)					17	12.40													
Hathor (12)					17	15.20													
Stanley	16	15.05	17	6.37	17	14.16	17	16.15	American	Frank Waterhouse & Co. (S. B.)	401.7	54.8	27.0	Honolulu	New York	(20)	8,436	6,933	5,187
Westmoreland	16	20.12	17	7.57	17	15.25	17	17.17	American	Green Star Steamship Corp. (S. B)	395.5	55.0	23.6	Kobe	New York	Sugar, and general	6,103	7,285	5,256
Sherman	17	2.00	17	8.17	17	17.10	17	18.30	American	Sherman Steamship Co.	400.3	45.3	25.9	Valparaiso	New York	(21)	6,307	5,037	3,492
Somerset	16	21.00	17	9.55	17	18.15	17	21.20	British	Federal Steam Navigation Co.	460.6	62.8	23.6	Bluff, N. Z.	New York	General	5,666	9,943	7,530
West Coyote	17	11.45	17	12.52	17	20.12	18	18.50	American	Williams, Dimond Co. (S. B.)	410.5	54.2	24.0	San Francisco	United King.	(22)	6,207	6,567	4,899
Altai Maru	17	10.10	17	14.50	17	21.52	17	23.00	Japanese	Osaka Shosen Kaisha	425.0	56.2	23.6	Yokohama	New York	(23)	6,758	7,903	5,635
San Juan	17	13.45	18	6.34	18	13.50			American	Pacific Mail Steamship Co.	283.0	37.0	13.11	San Francisco	Cristobal	General	498	2,379	1,593
Acajutla	18	4.30	18	7.56	18	14.10			British	Pacific Steam Navigation Co.	215.7	33.5	12.10	Champerico	Cristobal	Coffee, wood, etc	77	1,273	706

(7) Battle cruiser. (8) Motor schooner. (9) Supply ship. (10) Tug. (11) Reported in issue of July 17. (12) Reported in issue of September 4. (13) Nitrate, cotton, etc. (14) Nitrate, cotton, and metals. (15) Sugar, hemp, tobacco, and general. (16) Nitrate, wool, and hides. (17) Nitrates, copper, quillay, and vanadium. (18) Sugar, hemp, and lumber. (19) Ivory nuts, coffee, and hides. (20) Sugar, hemp, and rubber. (21) Copper bars and nitrate. (22) Lumber, wheat, flour, cotton, oil, canned goods, soda, and household goods. (23) Oil, rubber, sugar, and general.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Sept. 12	Ulua	United Fruit Co.	Port Limon.
Sept. 13	Heredia	United Fruit Co.	New Orleans.
Sept. 13	St. Mellons (10)	British Government	St. Lucia.
Sept. 13	Toloa	United Fruit Co.	New York via Habana.
Sept. 13	Frednes	J. C Knudsen	Cape Gracias.
Sept. 14	Glenpool	Standard Oil Co.	Tampico.
Sept. 14	Pennsylvania	Texas Oil Co	Point Lobos.
Sept. 15	Metapan	United Fruit Co.	New Orleans via wayports
Sept. 15	Carrillo	United Fruit Co.	New York via Kingston.
Sept. 16	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Sept. 17	Manuel Calvo	Spanish Line	Barcelona via Habana.
Sept. 17	Agamemnon	Royal Netherlands West India Mail	Amsterdam.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Sept. 11	Vinton County	United States Shipping Board	Kingston.
Sept. 12	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Sept. 12	Ulua	United Fruit Co	New York via Habana.
Sept. 13	Ulysses	Panama Railroad Steamship Line	Norfolk.
Sept. 13	William Isom	American Italian Commercial	Tampico.
Sept. 14	Toloa	United Fruit Co.	Port Limon.
Sept. 14	Calcutta (H. M. S.)	British Government	West Indies.
Sept. 14	St. Kitts	British Government	Kingston.
Sept. 14	St. Mellons (10)	British Government	Kingston.
Sept. 14	Gotha	N. Lloyd	Kingston.
Sept. 15	Elm Leaf	Anglo-Saxon Petroleum Co.	Tampico.
Sept. 15	Metapan	United Fruit Co.	New Orleans.
Sept. 16	Carrillo	United Fruit Co.	New York via wayports.
Sept. 16	Glenpool	Standard Oil Co.	Tampico.
Sept. 16	Heredia	United Fruit Co.	New Orleans via wayports
Sept. 17	Cristobal	Panama Railroad Steamship Line	New York.
Sept. 18	Pennsylvania	Texas Oil Co.	Tampico.
Sept. 18	Manuel Calvo	Spanish Line	Ponce via Pto. Colombia.

PORT OF BALBOA.

*ARRIVALS.

Sept. 18	Annette Rolph	Rolph Mail Steamship Co.	Valparaiso.

*DEPARTURES.

None			

*Other than ships passing through the Canal.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending September 18, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Jamaica	Pacific Steam Navigation Co	September 12.	September 12.	2	.....
Ansaldo San Giorgio IV	Societa Nacional di Navigazion	September 12.	September 18.	15	.....
City of Para	Pacific Mail Steamship Co	September 14.	September 14.	.....	5
Laura C. Hall	Pacific Metals Corporation	September 15.	September 15.	5	.....
Altai Maru	Osaka Shosen Kaisha	September 17.	September 17.	80	.....
San Juan	Pacific Mail Steamship Co	September 17.	September 18.	243	28
Halsey	United States Shipping Board	September 17.	.....	3,433	.....

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended September 18:

Steamships *Marne*, rebuilding; *Koyo Maru*, repairs to bow where damaged; submarine *R-22*, periodic repairs; barges *Nos. 133* and *141*, general repairs; barges *Nos. 102* and *121*, fitting up wood decks for handling garbage; steamships *Adria*, boiler and machinery repairs; *Woudrichem*, boiler and engine repairs; dredge *No. 83*, general repairs; motor ship *Astmahco*, boiler and engine repairs; steamships *Ansaldo San Giorgio IV*, boiler and machinery repairs; *Nima Bua*, *Benjamin Brewster*, and *Juneau*, minor repairs; U. S. S. *Cleveland*, minor repairs.

The following vessels were at the Cristobal shops for repairs during the week ended September 20:

Steamship *General Goethals*, miscellaneous repairs and painting to engine, deck, and steward departments; U. S. S. *R-25*, repair and alter engine foundation; *Lake Ellicott*, repair ice machine and feed water heater; U. S. S. *Eagle No. 4*, fair dent, starboard side; tug *St. Mabyn*, repair dynamo generator; steamship *Agamemnon*, change propeller (done by tipping ship); *St. Andre*, electric weld port boiler; U. S. S. *Vulcan*, make new high power piston; steamships *San Juan*, repair piping and straighten crankshaft; *Cauca*, continued repairs to bow; *Bonham*, fitted cofferdam and continued overhaul of all auxiliaries, winches, and piping; *Toloa*, *General Hodges*, *Admiral Wainwright*, U. S. S. *Forse*, *Metapan*, *Broad Arrow*, *Caribbean*, *Jamaica*, U. S. S. *Poe*, steamship *Quilotta*, U. S. S. *Sanderling*, U. S. S. *Fields*, minor repairs.

Tariff Supplement.

The Panama Canal has issued supplement No. 2 to Tariff No. 4, as follows:

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
BALBOA HEIGHTS, C. Z., September 1, 1920.

The following amendments are made to Tariff No. 4, Schedule of Rates for Supplies and Services Furnished to Shipping and Allied Interests at the Panama Canal:

ITEM 4—HANDLING LINES.

Effective October 1, 1920.

5. The following charges will be made for handling lines by boat, when necessary, and on piers for vessels arriving or departing from berths:
   Vessels not exceeding 100 feet in length over all $2.00
   Vessels not exceeding 200 feet in length over all 5.00
   Vessels over 200 feet in length over all 10.00

ITEM 5—TUGS AND SUPPLY BOATS.

Effective October 1, 1920.

9. Lighthouse tender, steamship *Favorite:*
   For salvage work, per day or fraction thereof $1,500.00
   For other than salvage work, per day or fraction thereof 1,000.00

ITEM 7—LIGHTERS.

Effective October 1, 1920.

1. For class "A" lighters, having a capacity of 28,000 cubic feet and over:
   First day or fraction thereof $40.00
   Each succeeding half day or fraction thereof 15.00

ITEM 7—LIGHTERS—Continued.

2. For Class "B" lighters, having a capacity of over 17,999 cubic feet and less than 28,000 cubic feet:
   First day or fraction thereof $30.00
   Each succeeding half day or fraction thereof 10.00
3. For Class "C" lighters, having a capacity of less than 18,000 cubic feet:
   First day or fraction thereof 15.00
   Each succeeding half day or fraction thereof 5.00

ITEM 17—STORAGE ON PIERS.

Effective October 1, 1920.

1. Transit cargo, routed and unrouted:
   For first 20 days after delivery on pier ..... Free
   For succeeding 30 days, per ton per day $0.03
   Thereafter, per ton per day ..... .05
2. All transit cargo, routed and unrouted, shall be removed in the order of arrival.
3. Local cargo:
   For first 72 hours after cargo is ready for delivery ..... Free
   Thereafter—per 100 pounds per day (minimum charge, $0.25) $0.03
   Or, per car per day or fraction thereof 5.00
   (Company's option)
4. Specie:
   On specie, and other commodities on which freight is charged *ad valorem*:
   For first 72 hours ..... Free
   For each succeeding period of 72 hours or fraction thereof (Sundays and holidays excepted) ..... 1/16th of 1 per cent *ad valorem*
5. Cargo consigned to the Isthmus for reshipment beyond, when so indicated on bills of lading turned over to the Receiving and Forwarding Agent prior to the commencement of discharge, will be classed as "Transit Cargo" and subject to charges under paragraph 1 if forwarded complete as originally billed and the original bills of lading are surrendered to the Receiving and Forwarding Agent prior to reshipment.

ITEM 18—STEVEDORING AND TRANSFERRING CARGO.

Effective October 1, 1920.

1. Stevedoring:
   (*a*) General cargo, per ton $0.40
   (*b*) Cotton, wool, kapok, hemp, bark, leather, hides, and similar commodities, per ton of 2,000 pounds ..... .80
2. Transferring cargo between vessels:
   From cleared slings of the delivering carrier to the slings of the receiving carrier:
   (*a*) General cargo, per ton 1.80
   (*b*) Cotton, wool, kapok, hemp, bark, leather, hides, and similar commodities, per ton of 2,000 pounds 3.25
   NOTE 1. If the commodities listed under either paragraph 1 or 2 are offered on measurement basis, the general cargo rate will apply.
   NOTE 2. Rubber will be stevedored and transferred as general cargo.
   (*c*) Mail, baggage, and specie, per ton 3.00
   Mail will be handled at an average weight of 40 pounds per sack.
   (*j*) Minimum charge on specie, per shipment 2.50
3. Isthmian cargo:
   (*a*) For handling inward and outward local general cargo across piers at Cristobal and Balboa, per ton 1.00
   On other commodities, one-half of the rates specified in paragraph 2, items "b" to "j."
   NOTE.—Bills will be made against the delivering or receiving line, as the case may be.
   (*b*) Cargo for Colon landed on the piers at Cristobal will be delivered at the option of the Railroad Company, either through the freight house or on cars on public team track.
   If delivery is requested in cars at some place in the terminal other than on public team track, an additional charge will be made for switching, per car 7.50

ITEM 18—STEVEDORING AND TRANSFERRING CARGO—Continued.

Isthmian cargo—Continued.

Arrangements for delivery in cars must be made at the time the cargo is being discharged or prior thereto; otherwise, a charge will be made for rehandling, per ton $0.75

NOTE—Delivery must be taken within 72 hours after cargo is ready for delivery. If it remains on hand longer than 72 hours, storage or demurrage charges will be made in accordance with item 17, paragraph 3.

6. For extra labor used in the following:

(c) For rehandling, weighing, or sorting cargo on piers, for convenience of consignee, shipper, or vessel, per ton ..... .75

14. For use of electric winches, including operators, to facilitate loading or unloading cargo, per ton 1.25

ITEM 22—FUEL AND DIESEL OILS.

Effective August 1, 1920.

1. Fuel oil per barrel of 42 gallons, delivered to vessels at either Cristobal or Balboa $3.50

ITEM 30—RAT GUARDS.

Effective October 1, 1920.

1. For each rat guard loaned to vessel and not returned $10.00

ITEM 34—PANAMA RAILROAD PASSENGER TARIFF.

Effective October 1, 1920.

First class fares, per mile	$0.05
Second class fares, per mile	.02½
Children, between 5 and 12 years, 1st class	Same as second class rate
Children, between 5 and 12 years, 2d class	Half second class fare
Children under 5 years, when accompanied	Free
Minimum fare	.10
Cash fares, on train, additional	.10
Mileage books (1,000 miles)	40.00
Mileage books (500 miles)	20.00
Parlor and chair car seats	.50

BAGGAGE ALLOWANCE.

First class ticket ..... lbs.	150
Second class ticket ..... lbs.	75
Excess baggage, per pound	$0.02

SPECIAL SUNDAY AND HOLIDAY RATES.

First class, round trip	$3.00
Second class, round trip	2.00

CHESTER HARDING,
Governor, The Panama Canal.
President, Panama Railroad Company.

Concrete Fuel Oil Tanks at Canal Terminals.

Three 55,000-barrel tanks of concrete construction, for the storage of fuel oil have been erected among the steel tanks on the oil farms at the Canal terminals. One was erected at the Atlantic terminal in 1919, and one has been completed at each terminal this year.

The first concrete tank was 117 feet in outside diameter, cylindrical in shape, 30 feet high from floor to top of the wall. The floor was made 6 inches thick, stiffened with 5 rows of beams each way. The beams were 3 feet wide by 1 foot deep. The capacity of the tank is 55,000 barrels of 42 gallons each.

The walls were made 6 inches thick on top and 12 inches thick at the bottom, thoroughly reinforced with circumferential steel rods, and enough vertical rods to prevent temperature cracks.

The roof of this tank was made of No. 10 gauge steel plate, supported on a steel channel and at beam sections, with 25 pipe columns filled with concrete.

A special treatment was applied to the inside surface of the walls to prevent leaking. This treatment is described in Bureau of Yards and Docks specifications for coating interior surfaces of fuel oil reservoirs. A hydrostatic test is made on this type of a tank by filling it with water, which gives higher pressure than crude oil, due to its greater weight.

The 2 tanks constructed this year differ from the one described above, in that the later tanks have solid concrete roofs supported on concrete beams and columns. Considerable saving in money was made by the use of these roofs. Much less time is required to complete this type of a roof than a steel one. At the present time several months are saved by constructing entirely in concrete. Less than one month is sufficient to complete the pouring of a tank.

Of the 2 tanks built this year, with concrete roofs, that at Cristobal cost approximately $47,300, and that at Balboa approximately $53,000, the difference being due to additional cost of excavation on the site at Balboa. It has been estimated that the concrete tanks are about $70.000 cheaper, each, than steel tanks of equal capacity, and they were built much more quickly than steel tanks could have been under present delivery conditions.

Notice to Mariners.—Lights Established, Cristobal Harbor.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 16, 1920.

CIRCULAR No. 643-77:

1. On or about October 1, 1920, two white occulting lights will be established near the western extremity of Cristobal Harbor, within the "L." Position, latitude 9° 23′ 23″ North, longitude 79° 55′ 07″ West. These lights will be unwatched. Illuminant, acetylene gas.

UPPER LIGHT—Focal plane 110 feet, visible 18 miles, exhibited from top of pyramidal steel lattice work tower painted black. Characteristic, white, flashing; 0.5 second light, 3.0 seconds dark; 0.5 second light, 3.0 seconds dark; 5.0 seconds light, 8.0 seconds dark (one group of flashes every 20 seconds).

LOWER LIGHT—Exhibited from bracket on the northeastern extremity of tower. Focal plane 38 feet, visible 9 miles. Characteristic, white, flashing; 1 second light, 1 second dark.

2. The gas buoy marking western extremity of the East Breakwater will then be discontinued.

CHESTER HARDING,
Governor.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights (telephone 286):

Clerk translator (male and female); $1,200 to $1,800 a year; form 304; age, 18 years and over; vacancies in War Department, General Service Schools, Fort Leavenworth, Kans., and in the Departmental Service, Washington, D. C.; October 20-21, 1920.

Druggist (male and female); $720 to $2,000 a year; form 1312; age, 21 but not 50 years; vacancies in the Public Health Service throughout the United States, and in the Internal Revenue Service; October 20, 1920.

Editorial clerk (male and female); $1,200 to $1,600 a year; form 304; age, 18 years and over; October 20, 1920.

Electrical engineering aid (male and female); $1,200 to $1,680 a year; form 1312; age, under 40 years; vacancies in the Bureau of Mines, Department of the Interior, for duty at Pittsburgh, Pa. or elsewhere.[1]

Microscopist (male and female); $1.800 a year; age, within reasonable limit; vacancies in office of Surgeon General, Army Medical Museum, and elsewhere.[2]

Assistant oil chemist (male and female); $1,400 to $1,800 a year; age, 20 but not 45 years; vacancies in the Bureau of Standards, Department of Commerce, Washington, D. C., October 26, 1920.[2]

Assistant enameled metal technician (male and female); $1,000 to $1,500 a year; vacancies in the Bureau of Standards, Department of Commerce, Washington, D. C., and elsewhere; age, 21 years and over; October 26, 1920.[2]

Coal mining engineer; salary, $4,000 to $4,800 a year; associate coal mining engineer, salary, $3,000 to $4,000 a year; assistant coal mining engineer, salary, $2,000 to $3,000 a year; junior coal mining engineer; $1,500 to $2,000 a year (male and female); form 2118; age, under 45 years; vacancies in the Bureau of Mines, Department of the Interior, for service in the field; October 26, 1920.[2]

Matron (female); $500 to $720 a year; vacancies in the Indian Service, in positions of matron, seamstress, housekeeper, field matron, and female industrial teacher; age 21 years but not 50 years; October 20; November 17; December 15, 1920.[2]

[1] Nonassembled. Applications will be received at any time until further notice.

[2] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Examinations for Clerks, Postal Clerks, and Stenographers and Typists, Panama Canal Service.

The United States Civil Service Commission announces the following examinations for the Panama Canal service on the dates given: Clerk, October 16, 1920; postal clerk, October 20; and stenographer and typist, October 23.

In the examination for clerks, accounting training and experience has been included as an optional subject, in addition to the former optional subjects of typewriting, bookkeeping, general business training and experience, and timekeeping training and experience. The usual entrance salary for clerk with accounting experience is $158 a month; for clerks qualifying in any of the other optional subjects, from $106 to $127 a month.

The postal clerk examination will be a second grade examination, as in the United States, instead of first grade, as previously on the Canal Zone. Entrance salary is $125 a month.

No changes have been made with respect to the stenographer and typist examination. The entrance salary is $137 a month.

Further information may be ascertained from announcement No. 484, posted in the Canal clubhouses and post offices, or from the local Civil Service Board at Balboa Heights (telephone 286, Balboa).

Important Age Limit Concession in Civil Service Clerk, Stenographer, and Typewriter Examinations on Two Dates Only.

For the clerk examination, to be held on the Isthmus on October 16, 1920, and also for the stenographer and typewriter examination scheduled for October 23, the age limit has been raised to 55 years. This concession is for these examinations only, and has been granted by the Civil Service Commission in order to enable those who have passed the age limit for these examinations to compete for a classified status.

Gallstones a Valuable By-product of Slaughterhouse.

As a by-product of the abattoir at Cristobal, the Commissary Division has sold more than a pound of gallstones recovered from cattle, realizing from the sales approximately $160. They were sold to an agency which forwarded them to Japan.

In investigating the market for the stones, the commissary purchasing agent in New York found that in the United States a few years ago they were thrown away or sold for a few cents. Then a market developed and prices went up by leaps of $25 a pound to $150, at which they seemed to stick, though sales as high as $225 a pound have been reported. Numerous theories have been advanced as to their use, principally as charms or medicaments, but it is believed that they are wanted on account of their large content of cholesterin, which is used principally in biological laboratories.

Personal Estates of Deceased or Insane Employees Administered Free.

The Administrator of Estates calls attention to the fact that the personal estates in the Canal Zone of deceased or insane employees of The Panama Canal or the Panama Railroad Company are administered by him free of all court costs and expenses of administration.

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Sebastian Addison	39011	Barbados	Colon	Building Division	Sept. 10, 1920.
Manuel Jiminez	45470	Panama	Summit	Cattle Industry	Sept 5, 1920.
Simon Moses (Moises)	23634	Guadeloupe	Camp Bierd	Panama Railroad	Sept. 2, 1920.
Clarence Ramsey	44366	Barbados	Colon	Panama Railroad	Sept. 6, 1920.
George Skerrett (Skerritt)	34421	Montserrat	Cristobal	Supply Department	Sept. 2, 1920.

Official Circulars.

Refund for Lost or Damaged Property.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 21, 1920.

To all concerned—Refunds for lost or damaged material, supplies, or property, whether covered by payroll deduction, security deposit, or formal invoice, can only be made when authorized by this office

Requests for such refunds will be transmitted to the surveying officer for investigation and recommendation to the Governor, whose decision in turn will be transmitted by the surveying officer to all concerned.

CHESTER HARDING,
Governor, The Panama Canal.
President, Panama Railroad Company.

Acting Superintendent and Acting Master of Transportation, Panama Railroad.

PANAMA RAILROAD COMPANY,
OFFICE OF THE PRESIDENT,
BALBOA HEIGHTS, C. Z., September 15, 1920.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective September 16, 1920, and during the absence on leave of Mr. S. W. Heald, Mr. W. F. Foster will act as Superintendent of the Panama Railroad Company, and Mr. W. J. Bissell will act as Master of Transportation.

CHESTER HARDING,
President.

Reduced Rate on Steamships for Nondependent Relatives.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 21, 1920.

To all concerned—Effective October 1, 1920, the issuance of reduced rate of $45 to nondependent relatives of employees from New York to Cristobal via the Panama Railroad Steamship Line, which was temporarily suspended, as per circular of April 30, 1920, will be resumed with the understanding, however, that priority in assignment of accommodations will be given to employees and their immediate families.

By direction of the Governor.

C. A. MCILVAINE,
Executive Secretary.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 15, 1920.

CIRCULAR NO. 259:

Effective September 17, 1920, Mr. W. F. Foster is designated an accountable official of The Panama Canal, *vice* Mr. S. W. Heald, and as such will account for all nonexpendable property in use by the Superintendent of the Panama Railroad and the Panama Canal transportation.

H. A. A. SMITH,
Auditor, The Panama Canal

Approved:
CHESTER HARDING,
Governor.

Accountability for Household Furniture.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 3, 1920.

CIRCULAR NO. 258:

To all concerned—All household furniture in use in any building, a part or all of which is used as quarters, will be charged to the district quartermaster in whose district it is located, except in cases where it is impractical for him to accept responsibility, as follows:

Executive Department—Police station, Monte Lirio; police station, Gamboa; penitentiary, Gamboa.

Health Department—Palo Seco asylum.

Cattle Industry—Mandinga-Far Fan pasture camps, except Cocoli; Mindi hog farm; Limon plantation; Juan Mina plantation; Mandinga pasture camp; Frijoles plantation; Bohio pasture camp; Manawa.

Supply Department—La Boca mess; Camp Bierd mess.

Hydrographic office—Alhajuela, Trinidad, Vigia.

Municipal Engineering—Maintenance Camp, Toro Point.

Marine Division—Lighthouse subdivision; La Pita signal station; Gamboa signal station; Sosa Hill signal station.

In the quarters enumerated above and in others which in the future may be established in buildings equally inaccessible, the household furniture will be charged to the divisions using it, for physical accounting only, and district quartermasters will exchange and repair it without charge.

Rooms held for the convenience and occasional use of one or more employees of a division are not considered quarters.

H. A. SMITH,
Auditor

Approved:
CHESTER HARDING,
Governor.

Appointments.

PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., September 9, 1920.

To all concerned—Effective September 10, Mr. T. M. Reynolds is appointed station agent at Panama, *vice* Mr. J. D. Williamson resigned, and will enter upon his duties on his return from leave.

Effective same date, Mr. H. C. Adams is appointed station agent at Colon, *vice* Mr. T. M. Reynolds transferred.

ROBT. BEVERLEY,
Assistant to Superintendent.

Approved:
S. W. HEALD,
Superintendent.

Notice.

The special launch for Taboga, leaving dock 19, Balboa, at 8 p. m. on Sundays, will be discontinued hereafter.

R. K. MORRIS,
Chief Quartermaster.

Acting Superintendent, Southern District, Municipal Engineering Division.

THE PANAMA CANAL,
DEPT. OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., September 17, 1920.

All concerned—Effective September 17, Mr. W. E. Maxon will act as superintendent of the southern district, during the absence on leave of Mr. Geo. W. Green.

D. E. WRIGHT,
Municipal Engineer.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., September 20, 1920.

The following insufficiently addressed mail matter has been received in the office of the Director of Posts and may be obtained upon request of the addressees. Requests for forwarding may be made by telephone, calling No. 182, Balboa:

Adler, Mr. and Mrs.[2]
Alfred, Mrs. L. E.
Bedore, Phillip
Brucks, Fred J., Box 1596
Burow, J. S., c/o R. R.
Cannon, P. J.
Cavanaugh, Frank, Box 374
Champion, F. Sutton
Cockerell, Mrs. Susan
Daniels, Chas. T.
Hall, Mrs. A. A.
Haywood, Thos. J., Box 578
Harman, John J.
Hirshfield, Adorf[2]
Hurert, Mrs. Clarence.
Keight, W. A., Box 464
Kenyon, Mrs. A., Box 314
Johnson, Mrs. Dorothy
Lorsbough, C. J., Box 446
Lopez, Lino M.
Ludwig, Max
Maulvie, Mr., Box 198
Mitchell, Josiah
McDonald, Miss Marg., Box 228
Neuman, J. B. A., Box 408[3]
Nick, Andy, Box 3[1]
Norbury, Joseph[3]
Paulson, J. M.[3]
Perez, R. M.
Prosser, John H.
Rodman, John W.
Stanton, Emerson
Stevens, J. A.
Symons, W. Fred, Box 443
Vaughn, Charles
Walters, Mrs. L. A., Box 1015
Welter, Theo.[2]
White, Miss E. M., Box 279
Wilson, Joel

[1] Card. [2] Paper. [3] Catalogue.

Shipping Commissioner's Sale.

The Shipping Commissioner, room 305, Administration Building, Balboa Heights, will accept written bids up to noon Monday, October 11, 1920, for the purchase of the personal effects belonging to the estates of George Prettie and Alberto Orozco, deceased American seamen. Itemized lists of the articles offered for sale will be found posted at the Canal Zone customs offices at Balboa and Cristobal, and persons desiring to examine the effects should apply to the Shipping Commissioner's office on any business day. Bids may be made for the entire lot of the effects of each decedent, or be limited to individual articles, and should be submitted in sealed envelopes, addressed to the Shipping Commissioner, marked "Bid on effects of (insert name of seaman), deceased." The right is reserved to reject any or all bids, and no advance deposit of money is required.

Sale of Harness and Sole Leather.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, up to 10.30 a. m., September 30, 1920, for about 133 pounds harness leather at Ancon corral, and 2,511 pounds sole leather at Balboa storehouse in deteriorated condition. Form of proposal may be had upon application to the office of the Chief Quartermaster. The Panama Canal reserves the right to reject any or all bids.

Sale of Launch Hull.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, up to 10.30 a. m., October 10, 1920, and then opened for the purchase of a launch hull, about 36 feet by 9 feet 1 inch by 4 feet 6 inches, now at Gamboa. Form of proposal may be had upon application to the office of the Chief Quartermaster, Balboa Heights, or the office of the Superintendent of Cattle Industry, Cristobal. The Panama Canal reserves the right to reject any or all bids.

Sale of Typewriters.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., October 10, 1920, and then opened, for the purchase of all or part of a lot of 30 used typewriters on hand at Balboa storehouse. Form of proposal may be had upon application to the office of the Chief Quartermaster, Balboa Heights, or the office of the General Storekeeper, Balboa. The Panama Canal reserves the right to reject any or all bids

Current Net Prices on Coal, Fuel Oil, and Beef.

Coal is being supplied to steamships including warships of all nations delivered and trimmed in bunkers, at $15.00 per ton of 2,240 pounds at Cristobal and $17.00 at Balboa. For ships in transit through the Canal, which are directed to take coal at Balboa, for the convenience of The Panama Canal, $15.00 per ton at Balboa. For ships taking less than car load lots from plants or less than 25 tons from lighters, the price is $16.50 per ton at Cristobal, $18.50 at Balboa.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa for $3.50 per barrel of 42 gallons.

Diesel oil is not sold by The Panama Canal, but may be obtained from private concerns at approximately $4.50 per barrel. Cable arrangements should be made in advance of arrival of vessel.

The following are current prices on fresh beef sold from the cold storage plant of the Canal. Prices quoted are United States currency, per pound net:

Beef hinds, 21 cents; beef fores, 16 cents, beef ribs, entire set, 23 cents; short loins, 29 cents. This beef is from Colombian cattle slaughtered on the Isthmus.

Rates at Hotel Aspinwall, Taboga.

The following are the current rates at the Aspinwall:

Employees: Dinner, lodging, and breakfast		$2.00
Employees	per day	2.75
Children under 12 years of age	per day	1.25
Servants of employees	per day	1.50
Employees for stay of 7 days	per day	2.00

Reduction of 10 per cent for employees on above rates for stay of 30 days.
Further reduction of 10 per cent for families of four or more.

Nonemployees	per day	3.50
Children of nonemployees	per day	1.50
Servants of nonemployees	per day	1.75
Meals without room: Breakfast		1 00
Meals without room: Luncheon		1 25
Meals without room: Dinner		1.25

Route Service Jitney—Cristobal-Mt. Hope.

The following is the schedule of the official jitney service between the Terminal building at Cristobal and Mount Hope. Cars stop at the office of the Commissary Division each way:

Leave Terminal Building.		Leave Mount Hope.	
A. M.	P. M.	A M.	P. M.
8.00	12.30	8.15	12.45
8.30	1.00	8.45	1.15
9.00	1.30	9.15	1.45
9.30	2.00	9.45	2 15
10.00	2.30	10.15	2 45
10.30	3.00	10.45	3 15
	3.30		3.45

COMMISSARY NOTE.

Recipes.

Some commissary patrons may not be aware of the fact that rice flour is an excellent item in baking as a substitute for the regular wheat flour. Several recipes are shown below:

RICE FLOUR BREAD.

2½ level cupfuls rice flour
1 level cupful corn flour
½ cupful wheat flour
5½ level teaspoonfuls baking powder
1 level teaspoonful salt
1 egg
1 tablespoonful corn syrup
2¼ cupfuls milk.

Sift dry ingredients together, beat egg, add milk and syrup, then flour, and beat all well. Turn into well-greased loaf tin and bake in moderate oven for 1 hour.

WAFFLES.

1 level cupful rice flour
1 level cupful corn flour
4 level teaspoonfuls baking powder
1 level teaspoonful salt
2 eggs, beaten separately
1½ cupfuls milk
4 level tablespoonfuls fat, melted.

Mix and sift dry ingredients. Beat yolks of eggs, add milk and combine gradually with first mixture. Add melted fat and fold in egg whites stiffly beaten. Pour from a pitcher into the center of a hot, well-greased waffle iron. Serve with maple syrup.

SPONGE CAKE.

1 level cupful sugar
1 level cupful rice flour
½ level teaspoonful salt
¾ level teaspoonful baking powder
3 eggs
2 tablespoonfuls cold water
1 teaspoonful lemon extract or 2 teaspoonfuls lemon juice.

Separate yolks and whites of eggs. Beat the yolks until creamy; add the sugar, lemon, and water and beat all until very light. Add to this the twice sifted mixture of rice flour, baking powder, and blend thoroughly. Finally fold in the stiffly beaten whites of the eggs. If lemon juice is added, the water will not be required. Bake in loaf tin in a medium oven, 20 to 30 minutes. This serves 15 people.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Volume XIV. Balboa Heights, C. Z., September 29, 1920. No. 7.

Progress of Commercial Traffic Through the Canal.

The progress of commercial traffic through the Panama Canal from its opening to the beginning of the current fiscal year, July 1, 1920, is shown graphically by means of the accompanying plate (page 87).

The chart indicates the total number of commercial ships handled through the Canal each month; the average number for each 6-month period; the average at any time for the period from the opening of the Canal to that time; and the average per month since June, 1916, the beginning of regular traffic after the suspension on account of slides in the Cut.

The total number of commercial vessels which passed through the Canal to July 1, 1920, was 10,212. Figures by 6-month periods are presented in this table:

COMMERCIAL VESSELS PASSING THROUGH THE PANAMA CANAL.

Period.	Number of vessels during period.	Average number of vessels per month for period.	Average number of vessels per month since opening of Canal.	Per cent above or below normal.	Per cent above or below previous record.
August 15 to December, 1914	351	78.0	78.0	.....	.....
January to June, 1915	721	120.2	102.1	+17.7	+54.0
July to December, 1915	428	71.3	90.9	−21.2	−40.6
January to June, 1916	332	55.3	81.4	−32.1	−22.4
July to December, 1916	890	148.3	95.5	+55.3	+169.0
January to June, 1917	916	152.7	105.4	+44.8	+3.0
July to December, 1917	1,044	174.0	115.5	+50.6	+13.9
January to June, 1918	1,024	170.3	122.7	+38.8	−2.1
July to December, 1918	1,048	174.7	128.6	+35.8	+2.6
January to June, 1919	980	163.3	132.2	+23.5	−6.5
July to December, 1919	1,154	192.3	137.8	+39.6	+17.8
January to June, 1920	1,324	220 7	144.9	+52.4	+14.8

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending September 25, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Manuel Calvo	Spanish Line	.....	Sept. 19	.....	57
Caribbean	Panama Railroad Cattle Industry	.....	Sept. 19	.....	½
Inca	Pacific Steam Navigation Co.	Sept. 19	Sept. 19	14	(1)
Toloa	United Fruit Co.	Sept. 19	Sept. 19	84	11
Laura C. Hall	Pacific Metals Corporation	.....	Sept. 20	.....	45
Urubamba	Peruvian Line	.....	Sept. 20	.....	1,654
Quillota	Pacific Steam Navigation Co.	Sept. 19	Sept. 21	209	1,221
Saint Andre	French Line	Sept. 19	Sept. 21	209	(1)
Pioneer	Standard Oil Co.	Sept. 19	Sept. 21	8,064	(1)
General Goethals	Panama Railroad Steamship Line	Sept. 19	.....	2,100	.....
Point Judith	Pacific Mail Steamship Line	Sept. 20	Sept. 21	53	(1)
Calamares	United Fruit Co.	Sept. 20	Sept. 21	490	79
Balboa	Colombian Maritime Co.	Sept. 20	Sept. 23	712	135
Parismina	United Fruit Co.	Sept. 20	Sept. 23	1,026	195
Lake Copley	United States Shipping Board	Sept. 21	.....	½	.....
General W. C. Gorgas	Panama Railroad Steamship Line	Sept. 21	Sept. 25	91	1,690
Abangarez	United Fruit Co.	Sept. 22	Sept. 22	1	(1)
Manavi	Pacific Steam Navigation Co.	Sept. 22	.....	768	.....
Caribbean	Panama Railroad Cattle Industry	Sept. 23	.....	220	.....
Alliance	Panama Railroad Steamship Line	Sept. 23	.....	324	.....
Panama	Panama Railroad Steamship Line	Sept. 24	.....	2,540	.....
Huasco	Chilean Line	Sept. 24	.....	500	.....
San Pablo	United Fruit Co.	Sept. 24	Sept. 24	32	(1)
F. D. Asche	Standard Oil Co.	Sept. 25	.....	12,000	.....

[1] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending September 25, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	*Tons.*
Point Judith	Pacific Mail Steamship Co	Sept. 19	Sept. 20	63	.....
Urubamba	Peruvian Line	Sept. 20	Sept. 20	.....	213
Laura C. Hall	Colombia Metals Corporation	Sept. 20	Sept. 20	6	20
Balboa	Colombia Maritime Co	Sept. 20	Sept. 20	1	16
Achilles	Panama Railroad Steamship Line	Sept. 21	.....	447	.....
Manavi	Pacific Steam Navigation Co	Sept. 22	Sept. 22	1	.....
Balboa	Colombia Maritime Co	Sept. 23	Sept. 23	.....	101
San Juan	Pacific Mail Steamship Co	Sept. 24	.....	(1) 20	(2) 66
Borgland	Peter Olsen	Sept. 24	Sept. 25	265	.....

[1] Ex *Pt. Adams* from Cristobal. [2] San Juan.

Change in Steamship Freight Rates Between Isthmus and New York.

The Panama Railroad has issued Tariffs 40 and 41 and Supplement No. 1 to Tariffs 31 to 36, in which the principal changes consist of an additional 10 per cent on the steamship proportion of all rates between New York and the Isthmus, which result in an increase of approximately 6 per cent in the through rates between Panama and New York, and 10 per cent between Cristobal and New York.

In addition to this the handling charges at Cristobal are for account of consignee or shipper instead of being absorbed in the freight as heretofore.

Panama Railroad Steamship Line Operating to West Coast as far South as Guayaquil.

The Panama Railroad Steamship Line has begun a service through the Canal from New York to Colombian and Ecuadorian ports as far south as Guayaquil, which is 2° 11′ south of the equator. The vessels are to stop at the Canal terminals en route. The first sailing was that of the steamship *Allianca*, which went through the Canal southbound on September 27, for Guayaquil via Buenaventura. On the return voyage she is due to call at Manta, Bahia de Caraquez, Esmeraldas, and Buenaventura.

It is expected that there will be 2 sailings a month in each direction, but no advice has been received on the Isthmus from the New York office of the line as to a fixed schedule or the number and names of the ships to be placed in this service.

Passengers and cargo will be carried.

Correction as to Comparative Cost of Steel and Concrete 55,000-barrel Oil Tanks.

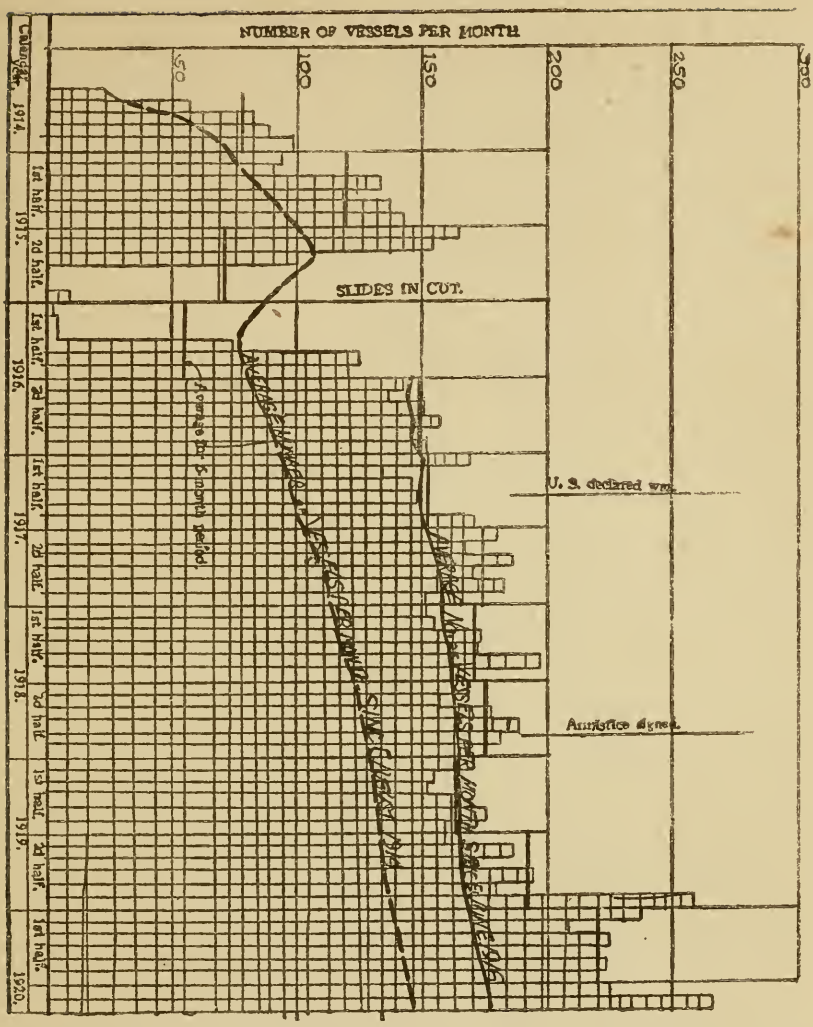
In the item on "Concrete Fuel Oil Tanks at Canal Terminals" in last week's issue, page 79, it was stated that "it has been estimated that the concrete tanks are about $70,000 cheaper, each, than steel tanks of equal capacity." This was in error. It should have been said that the steel tanks of equal capacity (55,000 barrels) cost at current prices about $70,000, which would make the concrete tanks about $20,000 cheaper, each.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, Pancanal, Washington."



COMMERCIAL VESSELS THROUGH THE PANAMA CANAL.—Upper line indicates average number of vessels per month since June, 1916; lower line indicates average number of vessels per month since August, 1914 (see page 85).

Ships at Cristobal Repair Shops.

The following vessels were at the Cristobal shops for repairs during the week ended September 27:

Steamships *General Gorgas*, *Allianca*, *Panama*, miscellaneous repairs and painting to engine, deck, and steward departments; *Balboa*, repair piping, port, and gangway braces; *Hathor*, repair damaged plates, etc., starboard side; *Lake Copley*, repair feed pump; U. S. S. *Rail*, rebrick boilers; steamship *Friesland*, install Panama Canal chocks and minor repairs; tug *St. Ewe*, repair feed, bilge, and circulating pumps; repair piping, make ladders and roll boiler tubes; U. S. S. *Lap Wing*, change propeller, clean and paint hull, etc.; U. S. S. *R-25*, repair and alter engine foundation; steamships *Caribbean*, clean and paint hull and superstructure; *Nokatay*, repair feed and air pumps, dynamo, etc.; *Guatemala*, electric weld stay nuts, repair steering engine, etc.; U. S. S. *C-285*, overhaul main and auxiliary engines; steamships *Bonham*, drew tail shaft, installed new sleeves, etc.; *Chepadoa*, *Manavi*, U. S. S. *Eagle No. 12*, *Eagle No. 38*, and U. S. S. *Cantigny*, minor repairs.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight September 25, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship	Arrived at port		Entered Canal		Completed transit		Cleared for sea		Nationality	Line	Length	Beam	Salt water draft	From—	For—	Cargo		Panama Canal tonnage	
	Day	Hour	Day	Hour	Day	Hour	Day	Hour								Nature	Tons	Gross	Net
Rosana	15	15.32	19	6.07	19	14.40	20	7.10	Costa Rican	Alberto Fait & Co.	107.7	25.0	7.0	Cristobal	Puntarenas	Ballast		256	185
Architect	17	16.21	19	6.22	19	14.46	19	15.45	British	Harrison Steamship Line	408.0	52.0	20.0	Liverpool	San Francisco	General		6,245	4,306
Port Stephens	18	9.00	19	6.28	19	16.49	19	17.47	British	Commonwealth and Dom. Line	475.0	55.0	27.1	Hull	Auckland	General	7,000	7,757	5,756
San Joaquin	18	15.03	19	6.30	19	15.56	19	17.05	Norwegian	W. Wilhelmsen	425.4	57.0	27.0	Tampico	Tocopilla	Fuel oil	9,400	7,059	5,076
Urubamba	12	22.14	20	6.00	20	13.33	21	2.20	Peruvian	Peruvian Line	381.0	46.0	19.7	Cristobal	Callao	General	1,650	4,803	2,951
Santa Teela	19	10.00	20	6.31	20	13.57	20	14.50	American	W. R. Grace & Co.	298.6	40.0	20.8	New York	Callao	General	2,000	2,835	1,827
Laura C. Hall	16	15.45	20	6.58	20	15.01	21	9.22	British	Pacific Metals Corporation	81.0	25.0	9.0	Cristobal	Buenaventura	General	45	130	69
Shortsville	19	22.08	20	7.03	20	14.37	20	15.40	American	Luckenbach S. S. Line (S. B.)	324.0	46.0	22.0	New York	San Francisco	General	3,898	3,959	2,628
Clan MacKellar	20	5.40	20	7.20	20	15.06	20	19.08	British	Clan Steamship Line	409.5	52.0	28.3	New York	New Chwang	Crude oil	7,500	6,450	4,698
Peru [1]	20	6.13	20	7.54	20	15.48	21	19.08	Danish	East Asiatic Steamship Co.	413.0	53.6	16.0	Copenhagen	San Francisco	General	600	7,404	5,658
Cherry Branch	19	22.23	20	9.35	20	16.44	20	18.48	British	Nautilus Steam Slipping Co.	398.0	51.0	17.7	Liverpool	Coronel	General	3,267	5,391	3,974
West Kasson	20	10.17	20	10.38	20	17.39	20	18.30	American	Pacific Mail S. S. Co. (S. B.)	410.5	54.3	20.6	Boston	San Francisco	General	5,000	6,547	4,864
West Keene	20	11.00	20	11.30	20	18.40	20	23.36	American	Matson Navigation Co. (S. B.)	410.0	54.0	24.6	Norfolk	Pearl Harbor	Coal	7,081	6,547	4,876
Hwah Jah	20	20.10	21	6.20	20	14.00	21	17.40	Chinese	Chinese Government	438.0	52.6	20.0	New York	Yokohama	General	4,500	6,139	4,432
Achilles	20	18.10	21	6.23	21	13.49			American	Panama Railroad Steamship Line	536.0	65.0	30.0	Norfolk	Balboa	Coal	12,025	11,519	7,008
Saint Andre	19	6.15	21	10.10	21	18.18	21	21.00	French	Cie. Gle. Transatlantique	403.0	50.0	16.4	Bordeaux	Valparaiso	General	900	5,917	4,146
Amur Maru	21	11.36	22	6.22	22	16.18	22	17.25	Japanese	Osaka Shosen Kaisha	425.0	56.0	27.5	New York	Yokohama	General	7,921	7,901	5,629
Margaret Coughlan	21	18.50	22	6.25	22	15.10	22	18.45	British	Canadian Western S. S. Ltd.	411.5	54.0	14.6	Grangemouth	Vancouver	Ballast		6,624	4,999
Manu	21	7.06	22	6.32	22	14.17	22	15.20	Spanish	Suarez & Munez	365.0	45.0	14.6	Baridoc	Taltal	Ballast		4,152	2,855
Richconcal	21	22.05	22	6.53	22	17.19	22	21.30	American	Struthers & Dixon (S. B.)	435.0	56.0	27.0	Tampico	Iquique	Fuel oil	9,081	7,642	5,327
Clauscus	22	5.15	22	9.50	22	18.00	22	19.00	American	Green Star Line S. S. Corp.	409.8	54.2	24.5	Sabine	Portland	Sulphur	7,600	6,581	4,741
Quillota	19	9.07	22	12.00	22	17.05	22	22.33	British	Pacific Steam Navigation Co.	360.0	46.0	19.3	London	Guayaquil	General	402	4,768	2,987
Sciota [2]	1	16.15	22	9.40	22	16.58			American	United States Navy				Coco Solo	Balboa	Ballast			350
Balboa	20	20.40	23	6.05	23	13.25	23	20.50	American	Colombian Maritime Co.	190.0	29.1	12.0	Cristobal	Buenaventura	General	134	741	
West Cahokia	22	19.57	23	6.26	23	14.31	23	15.30	American	Sudden & Christensen (S. B.)	410.5	54.0	25.0	Philadelphia	San Francisco	Coal and steel [6]	4,366	6,622	4,882
Adelina	23	8.19	23	9.12	23	16.13	23	17.15	Spanish	Naviera Guadalquevir	359.7	49.9	25.0	Newport News	Iquique	Coal	5,500	4,460	3,090
Tacoma Maru	23	8.45	23	9.23	23	17.16	23	18.10	Japanese	Osaka Shosen Kaisha	419.0	51.0	18.0	New Orleans	Yokohama	General	501	6,146	4,241
San Juan	18	13.50	24	6.06	24	13.45	25	22.44	American	Pacific Mail Steamship Co.	283.0	37.0	19.0	Cristobal	San Francisco	General	1,802	2,379	1,593
Vulcan [3]	19	23.55	24	6.19	24	14.50	24	15.45	American	United States Navy	386.9	53.0		New York	Bremerton	Naval supplies	6,500		
Isis	24	6.33	24	7.40	24	15.55	24	16.40	British	Philipps, Philipps & Co.	477.5	62.5	18.0	Hartlepool	Columbia river	Ballast		9,629	7,013
Sanderling [4]	18	15.10	24	8.22	24	15.52	25	22.30	American	United States Navy	187.0	36.0	13.3	Norfolk	San Diego	Ballast			
Sherman [5]	23	7.52	24	10.00	24	16.58	24	17.55	American	United States Army	465.5	49.0	25.6	New York	San Francisco	Army supplies	4	7,805	5,733
Friesland	22	19.35	24	10.47	24	20.51	24	20.30	British	Glen Line, Ltd.	520.7	64.2	15.0	Newcastle-on-Tyne	Port Townsend	Ballast		12,321	8,690
Pallas	24	22.05	25	6.48	25	13.30	25	18.07	American	Swayne & Hoyt (S. B.)	380.5	53.1	20.5	Buenos Aires	San Francisco	General	6,503	5,659	4,034
Kinderdijk	25	6.17	25	7.35	25	15.07	25	16.14	Dutch	Holland-American Line	469.0	58.0	17.0	Rotterdam	San Francisco	General	50		
Cheyo Maru	25	8.25	25	9.20	25	17.37	26	13.20	Japanese	Toyo Kisen Kaisha	400.0	53.0	22.6	New York	Shanghai	(7)	4,818	6,186	4,457
Cape Romain	25	8.22	25	10.58	25	18.31	26	15.55	American	Atlantic Gulf & Pacific S. S. Co.	376.4	52.3	20.2	Baltimore	San Francisco	General	4,300		

[1] Motor ship. [2] Tug. [3] Collier. [4] And barge No. 280. [5] Transport. [6] 3,140 tons coal. [7] Steel, machinery, cigarettes, tobacco, and merchandise.

PACIFIC TO ATLANTIC.

Inca	18	17.00	19	7.40	19	15.05	19	23.05	British	Pacific Steam Navigation Co.	360.0	43.2	20.0	Guayaquil	New York	General	1,880	3,952	2,751
Halsey	17	17.20	19	8.20	19	15.50	19	15.50	American	Struthers & Dixon (S. B.)	435.0	56.0		San Luis	New York	Crude petroleum	(16)	7,642	5,324
Orduna	19	6.00	19	10.05	19	18.05	20	3.14	British	Pacific Steam Navigation Co.	550.3	67.3	27.6	Valparaiso	Liverpool	General	4,568	17,163	11,905
Eastern Glade	19	14.00	19	14.42	19	22.00	20	12.45	American	Luckenbach S. S. Line (S. B.)	399.9	54.7	21.0	San Francisco	Philadelphia	(12)	7,500	6,108	4,335
Point Judith	8-19	10.30	20	6.30	20	14.39	21	6.07	American	Pacific Mail Steamship Co.	289.1	44.1	19.0	San Francisco	Baltimore	(13)	2,752	2,895	1,982
Balboa	20	11.45	20	13.25	20	20.40	23	6.05	American	Colombian Maritime Co.	190.0	29.1	15 0	Buenaventura	Cristobal	(14)	712	741	350
Lake Fithian	20	17.15	21	6.26	21	14.15	21	14.15	American	New Orleans & S. A. Co. (S. B.)	253.6	43.8	24.0	Iquique	New Orleans	Nitrate and sugar	4,034	2,915	1,907
Covena	22	6.00	22	8.11	22	16.45	23	1.30	American	Coastwise Transp. Co. (S. B.)	253.0	43.8	24.0	Antofagasta	New Orleans	Nitrate of soda	3,410	2,765	1,799
Chepadoa	22	7.00	22	8.58	22	18.35	23	23.15	American	U. S. and A. Line (S. B.)	402.5	53.1	27.0	Melbourne	New York	Chrome ore, etc.	8,105	6,577	4,944
Manavi	22	8.00	22	9.55	22	18.20	27	6.15	British	Pacific Steam Navigation Co.	216.0	35.1	15.2	Guayaquil	Cristobal	(15)	768	1,357	884
Annam	21	18.30	22	14.17	22	21.30	22	22.18	Danish	East Asiatic Steamship Co.	410.0	55.2	27.9	Hongkong	Copenhagen	General	8,200	7,067	5,318
Eurydamas	22	13.10	23	6.30	23	14.07	23	14.35	British	Alfred Holt & Co.	410.1	49.3	24.9	Vancouver	Liverpool	General	7,092	5,718	4,189
Lowther Castle	23	9.45	23	10.47	23	18.50	23	20.00	British	J. Chambers & Co.	400.0	51.8	22.6	Iloilo	New York	General	6,533	5,768	4,367
No. 1688 [8]	22		23	9.03	24	16.30			Panaman	T. Agrio	20.0	5.2		Panama	Colon				
Gen. O. H. Ernst	23	19.00	24	7.40	24	16.20	25	12.10	American	Panama Railroad Steamship Line	356.4	45.3	24.0	Caleta Buena	Wilmington	Nitrate of soda	4,213	4,503	2,764
R-22 [9]	8-19	15.30	24	8.48	24	16.09			American	United States Navy				Balboa	Cristobal				
Favorite [10]	21		24	11.08					American	United States Government				Balboa	Gatun Lake				
Huasco	24	12.20	24	13.02	24	19.53			Chilean	South American Steamship Co.	379.7	44.3	19.9	Valparaiso	Cristobal	General	500	4,552	3,182
Talabot	24	14.50	25	6.51	25	15.30	25	15.30	Norwegian	W. S. Bjonneso & Son	410.7	56.3	30.1	Antofagasta	New York	Nitrates	11,200	8,245	6,285
Port Denison	24	23.00	25	8.06	25	16.05	25	19.50	British	Commonwealth and Dom. Line	480.4	60.3	26.9	Wellington	London	Frozen, general	8,000	10,912	8,336
Lancaster	25	12.15	25	8.18	25	16.35	25	21.32	American	Green Star Line	434.3	57.7	19.6	Taku Bar	New York	General	10,000	7,943	5,838
Borgland [11]	24	3.00	25	12.14	25	19.55	25	19.55	Norwegian	Peter Olsen	362.0	51.5	24.6	Tacoma	Christiania	Flour	3,000	5,274	3,886
Lucerie	25	12.15	25	14.30	25	23.24	26	11.45	British	Andrew Weir & Co.	412.5	55.5	28.7	Caleta Colosa	Alexandria	Saltpeter	9,530	6,895	4,863

[8] Sailer. [9] Submarine. [10] Salvage tug. [11] Motor schooner. [12] Lumber and general merchandise. [13] General, and canned goods. [14] Coffee, hides, nuts, rubber, hats, and cocoa.
[15] Ecuadorian products. [16] 1,636,494 barrels.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Sept. 19	Pioneer	Standard Oil Co.	Tampico.
Sept. 19	Toloa	United Fruit Co.	Port Limon.
Sept. 19	Gen. G. W. Goethals	Panama Railroad Steamship Line	New York via Haiti.
Sept. 20	Calamares	United Fruit Co.	New York via Habana.
Sept. 20	Parismina	United Fruit Co.	New Orleans.
Sept. 21	Lake Copley	United States Shipping Board	New York.
Sept. 21	Gen. W. C. Gorgas	Panama Railroad Steamship Line	Colombian ports.
Sept. 22	St. Ewe [2]	British Government	Southamptom.
Sept. 22	Abangarez	United Fruit Co.	New Orleans via wayports
Sept. 23	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Sept. 23	St. Claude [2]	British Government	New Castle.
Sept. 24	San Pablo	United Fruit Co.	Boston.
Sept. 24	Panama	Panama Railroad Steamship Line	New York via Haiti.
Sept. 25	F. D. Asche	Standard Oil Co.	Tampico.
Sept. 21	Rail [17]	United States Navy	Guantanamo.
Sept. 22	St. Ewe [2]	British Government	Southampton.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Sept. 19	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Sept. 19	Toloa	United Fruit Co.	New York via Habana.
Sept. 21	Pioneer	Standard Oil Co.	Tampico.
Sept. 21	Agamemnon	Royal Netherlands West India Mail	Savannah, Ga.
Sept. 21	Calamares	United Fruit Co.	Port Limon.
Sept. 22	Abangarez	United Fruit Co.	New Orleans.
Sept. 23	Parismina	United Fruit Co.	New Orleans via wayports.
Sept. 24	San Pablo	United Fruit Co.	Boston via Limon.
Sept. 25	Gen W. C. Gorgas	Panama Railroad Steamship Line	New York via Haiti.

PORT OF BALBOA.

Sept. 21	Florence Olson	Oliver J. Olson Steamship Co.	Mollendo.	Sept. 24	Florence Olson	Oliver J. Olson Steamship Co.	San Francisco.

[17] Mine sweeper.

Subsistence for Extra Deck Hands Furnished to Vessels.

THE PANAMA CANAL, DEPARTMENT OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., September 24, 1920.

To all steamship agents—Complaint has recently come to this office that deck hands furnished by The Panama Canal to a transiting vessel, for the purpose of assisting in the handling of lines at the locks, were denied subsistence by the master of the vessel.

Section 55 of the Rules and Regulations for the Operation and Navigation of the Panama Canal provides:

"Pilots and other authorized persons on duty, belonging to the Canal service, shall be subsisted without charge while on board vessels in transit through the Canal."

Please bring this regulation to the attention of your shipmasters, to the end that there may be no repetition of the well-founded complaint above referenced.

E. P. JESSOP,
Marine Superintendent.

Increased Rates on United Fruit Company's Lines.

Effective October 1 there will be an increase in passenger fares on the United Fruit Company's lines. Below are the rates that will apply to Panama Canal and Panama Railroad employees from Cristobal to New York and New Orleans:

	Minimum.	Maximum.
Cristobal to New York	$108.75	$120.00
Cristobal to New Orleans (direct)	82.50	95.25
Cristobal to New Orleans (via Bocas del Toro and Habana)	95.25	108.00

Authority to Carry Employees on Transports to San Francisco.

The War Department has authorized furnishing transportation to Panama Canal employees from the Canal Zone to San Francisco on any transports which may be passing through the Canal en route to San Francisco, when accommodations are available, at the $20 and $30 rates now in force between the Canal Zone and New York.

Applications from employees for such transportation should be made in the usual manner to the Executive Office of The Panama Canal.

Executive Order.—Paitilla Point Military Reservation.[1]

The area hereinafter described as Paitilla Point Military Reservation, formerly situated within the Republic of Panama, but acquired by the United States Government and now a part of the Canal Zone, is hereby set apart as a military reservation under the control of the Secretary of War, the said reservation, however, to remain subject to the civil jurisdiction of the Canal Zone authorities in conformity with the Panama Canal Act.

The said area is described as follows:

PAITILLA POINT MILITARY RESERVATION.

Starting at a triangulation station marked "Paitilla 1914" on the map (Panama Canal Drawing No. X–6053–1) the geodetic coordinates of which are Lat. 8°–58′ plus 3,045.82–feet and Long. 79°–30′ plus 5,847.92 feet, go on an azimuth of 180° –00′ for a distance of 1,399.24–feet to a concrete monument, marked "A" on the map, which is the point of beginning on the boundary of the reservation; thence on a line the azimuth of which is 270°–00′ for a distance of 1,146.95–feet to a concrete monument marked "B" on the map, which monument is on the extreme high water line on the shore of the Bay of Panama; thence along the extreme high water line, in a general southwesterly direction, for a distance of 6,000–feet more or less to a concrete monument marked "C" on the map, which monument is on the extreme high water line; thence on a line the azimuth of which is 123°–43′ for a distance of 67.3–feet to a concrete monument marked "D" on the map, which monument is on the extreme high water line. The last mentioned course between "C" and "D" cuts off the extreme end of Paitilla Point and coincides with the old Panama City boundary. From "D" follow the extreme high water line in a northerly direction along the east bank of the estuary of the Rio Matasnillo for a distance of 4,000–feet

more or less to a concrete monument marked "E" on the map; thence on a line the azimuth of which is 270°–00′ for a distance of 1,088.76–feet to a concrete monument marked "A" on the map, which is the point of beginning.

All bearings are true.

In addition to the above, the Secretary of War shall have control of all land on the eastern side of above described area between extreme high water line and low water line within the confines of the prolongation of boundary lines E–B and D–C; also all land on the western side of above described area between extreme high water line and low water line, but in no case further than the center line of the Rio Matasnillo, between the confines of the prolongation of boundary lines B–E and C–D.

WOODROW WILSON

THE WHITE HOUSE,
1 Sept., 1920.

[No. 3322.]

[1] The foregoing is being published as Canal Circular No. 601–113.

Cable Rates for Government Employees.[1]

The following is an extract from the revised agreement between The Panama Canal and Panama Railroad and the All America Cables, Inc., approved September 3, 1920:

1. The All America Cables, Inc., agrees to transmit over its lines, at 50 per cent (fifty per cent) of the existing tariff rate for private messages, all social and personal messages forwarded by officers, employees, and other persons in the service of the United States Government, the Panama Railroad Company, or The Panama Canal, stationed on the Isthmus of Panama; such reduced rates to apply at the time message or messages are sent, the sender having the privilege of prepaying reply at the same reduced rate of 50 per cent (fifty per cent) of the existing tariff rate, or the receiver of the message in the United States of America may reply to the same at the reduced rate granted on the Canal Zone.

2. The cable company will deliver, without extra charge, all messages addressed to persons residing in the Canal Zone within 2 miles of its Balboa or Colon offices.

[1] The foregoing has been published by the Panama Railroad Company as Circular No. RA-696, dated September 20, 1920.

Cooperative Colony for Vacation.

A movement has been started among employees in the Administration Building toward securing the names of 25 or 30 families who would care to spend their next summer's vacation in a co-operative colony on the Atlantic Coast of the United States.

Anyone interested in reducing vacation expenses in this manner may communicate with H. H. Hudson, Balboa Heights, Canal Zone.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights (telephone 286):

Clerk translator (male and female); $1,200 to $1,800 a year; form 304; age, 18 years and over; vacancies under War Department, General Service Schools, Fort Leavenworth, Kansas, and in Bureau of Chemistry, Department of Agriculture, Washington, D. C., October 20–21, 1920.

Commercial telephone engineer (male and female); $3,000 to $4,000 a year; form 1312; age, unlimited; vacancies in the Signal Service at Large, for duty at Washington, D. C., New York, N. Y., and Chicago, Ill.; October 12, 1920.[1]

Master computer, $1,800 to $2,400 a year.

Computer, grades I and II (male and female); $1,400 to $1,800 a year; form 1312; age, under 50 years; vacancies in the Ordnance Department at Large of the War Department, for duty at the various proving grounds within the United States; December 14, 1920.[1]

Cotton classer's helper (male and female); $900 to $1,440 a year; form 1312; age, 16 but not 25 years; vacancies in the Bureau of Markets, Department of Agriculture, for duty in Washington, D. C., or in the field; October 20, 1920.

Dairy manufacturing specialist (male and female); $2,200 to $3,200 a year; vacancies in the Dairy Division, Bureau of Animal Industry, Department of Agriculture, for duty in Washington, D. C., or in the field; form 2118; age, under 45 years; October 12, 1920.[1]

Druggist (male and female); $720 to $2,000 a year; form 1312; age, unlimited; vacancies in the Public Health Service throughout the United States and in the Internal Revenue Service; October 20, 1920.

Editorial clerk (male and female); $1.200 to $1,600 a year; form 304; vacancies in the Departmental Service, Washington, D. C., age 18 years and over; October 20, 1920.

Electrical engineering aid (male and female); $1,200 to $1,680 a year; form 1312; vacancies in the Bureau of Mines, Department of the Interior, for duty at Pittsburgh, Pa., or elsewhere; age, under 40 years.[2]

Laboratory helper and laboratory aid (male and female) $720 to $1,080 a year; form 1312; vacancies in the Bureau of Mines, Department of the Interior, for duty at Pittsburgh, Pa., or elsewhere; age, 18 but not 35 years; December 14, 1920.[1]

Laboratory aid in agricultural technology (male and female); form 1312; a vacancy in the Bureau of Plant Industry, Department of Agriculture, Washington, D. C., at $840 a year; age, within reasonable limits; October 20, 1920.

Matron, Indian Service (female); $500 to $720 a year; form 304; age, 21 but not 50 years; about 50 vacancies in the Indian Service, in the positions of matron, seamstress, housekeeper, field matron, and female industrial teacher; October 20, November 17, and December 15, 1920.

Metallographist (male and female); $1,800 to $2,500 a year; form 2118; age, within reasonable limits; a vacancy at the Rock Island Arsenal, Rock Island, Ill.; November 1, 1920.[1]

Microscopist (male and female); form 1312; age, within reasonable limits; a vacancy exists in the office of the Surgeon General, Army Medical Museum, Washington, D. C., at $1,800 a year; October 19, 1920.[1]

Mineral geographic aid, mineral geographer (male and female); $1,200 to $2,400 a year; form 1312; age, 20 but not 45 years; vacancies in the Geological Survey, Department of the Interior; October 20 and 21, 1920.

Ore-dressing engineer (male and female); $2,400 to $3,600 a year; form 2118; age, under 50 years; a vacancy exists in the Bureau of Mines, for duty at Moscow, Idaho; October 12, 1920.[1]

Preparator in nematology (male and female); $660 to $1,000 a year; form 304; age, 18 years and over; a vacancy exists in the Bureau of Plant Industry, Department of Agriculture; October 20, 1920.

Scientific assistant (male and female); $1,320 to $1,860 a year; form 1312; age, 20 years and over; vacancies exist in the Department of Agriculture, for duty in Washington, D. C., or in the field; October 20 and 21, 1920.[1]

Topographic draftsman (male and female); $1,500 to $1,880 a year; form 1312; age, 21 years and over; vacancies exist in the Engineer Department at Large, War Department; December 1, 1920.[1]

[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

[2] Nonassembled. Applications will be received at any time until further notice.

Official Circulars.

Absence of Engineer of Maintenance.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 25, 1920.

To all concerned—Effective to-morrow and during the absence on leave of Col. Jay J. Morrow the heads of departments and divisions reporting to the Engineer of Maintenance will report to the Governor.

CHESTER HARDING,
Governor.

Sale of Cement Sweepings.

PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., September 23, 1920.

To all concerned—The Panama Railroad Company has on hand 191 sacks of cement ex the steamship *Ancon*, April 16, 1920.

This cement is known as sweepings, or loose cement picked up after the discharge of a steamer. There is very little foreign substance to be found in it, and for almost any concrete work, it is just as good as any cement.

We will be glad to have you bid on this lot of cement before 3.00 p. m., Saturday, October 2, 1920. Please make your bids on the basis of keeping the bags, and also returning the bags to us.

A charge of 10 cents per bag will be collected when cement is delivered.

This charge will be refunded when bags are returned in usable condition.

W. F. FOSTER,
Acting Superintendent.

Appointment.

THE PANAMA CANAL,
DEPT. OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., September 20, 1920.

To all concerned—Effective September 18, 1920, Mr. Meade Bolton is appointed Architect, *vice* Mr. S. M. Hitt, resigned.

J. B. FIELDS,
Acting Resident Engineer.

Prices of Scrap.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 20, 1920.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective October 1, 1920, the following prices will be allowed by the Supply Department for scrap turned in by the various departments and divisions of The Panama Canal. The selling prices to departments and divisions, employees, and to individuals and companies are also indicated.

Kind of scrap.	Credit to be allowed division.	Issue and sale prices.	
		To Depts. of Panama Canal.	To employees and I.& C.
Car wheels.....	$7.00	$8.00	(1)
Cast iron.....	7.00	8.00	$35.00
Mixed scrap and wrought iron and steel.....	5.00	6.00	20.00
Rail, scrap.....	7.00	8.00	(1)
Rail, relaying....	20.00	21.00	(1)
	Cwt.	*Cwt.*	*Cwt.*
Aluminum.....	10.00	11.00	25.00
Brass, mixed....	9.00	10.00	15.00
Brass borings and turnings..	7.00	8.00	12.00
Bronze screening	8.00	9.00	20.00
Copper, mixed....	10.00	11.00	20.00
Cork.....	2.00	3.00	10.00
Hose.....	2.00	3.00	6.00
Lead.....	4.00	5.00	10.00
Leather.....	2.00	3.00	6.00
Pewter.....	25.00	26.00	50.00
Rags.....	2.00	3.00	8.00
Rope.....	2.00	3.00	6.00
Rubber.....	2.00	3.00	6.00
Zinc.....	4.00	5.00	10.00

[1] None to be sold.

R. K. MORRIS,
Chief Quartermaster.

Additions to Commissary Stock.

Boot and Shoe Section.

Shoes, growing girls', Oxfords, dull calf, sizes 2½ to 6, pr..... $8.20
Shoes, growing girls' lace boots, dull calf, sizes 2½ to 6, pr..... 10.35

THE PANAMA CANAL RECORD

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Volume XIV. Balboa Heights, C. Z., October 6, 1920. No. 8.

New Record for Net Tonnage and Tolls.

The aggregate net tonnage, Panama Canal measurement, of the commercial ships passing through the Canal in the month of September, 1920, established a new high record. It was 1,008,785 net tons, as compared with the previous record of 951,345 net tons, in August, 1920.

September, 1920, is the first month in which as high as $1,000,000 in tolls has been levied. The tolls earned in September were $1,010,-166.38, as compared with the previous record of $936,209.44 in August.

In number of ships and in cargo, the traffic in September was less than that in August. In September 255 ships made the transit, with 1,009,557 tons of cargo, as compared with 266 ships in August, carrying 1,040,740 tons of cargo.

Aeroplane Flight To Washington.

First Lieut. Charles B. Austin left France Field, near Cristobal, at 6.26 a. m., October 6, in an attempt to accomplish the first flight by aeroplane from the Isthmus to Washington. His machine is a remodeled DeHaviland *4*, the front seat of which was removed to provide additional space for gasoline. He is carrying 220 gallons of gasoline and 15 pounds of mail. His first stop is to be Kingston, Jamaica, and from there his route will be to Habana, Cuba, thence to Miami, Florida, and thence to Bolling Field, Washington, with possibly a stop somewhere in the Carolinas. He is making the flight alone, but was accompanied 75 miles out to sea by 2 other planes, which then returned to France Field. The first 60 miles of the trip was made in just 40 minutes. The weather was clear and prospects are very good for a successful flight.

CANAL WORK IN AUGUST.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of August, 1920:

BALBOA HEIGHTS, C. Z., September 27, 1920.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of The Panama Canal for the month of August, 1920:

CANAL TRAFFIC.

The number of ocean-going commercial ships passing through the Canal during the month was 266, in addition to which there were 30 United States Government vessels, including 6 battleships, 2 destroyers, 5 submarines, 2 mine sweepers, 2 Eagle boats, 1 subchaser, 3 Navy tugs, 1 Army tug, 1 Army transport, 1 Navy supply ship, 1 Coast Guard cutter, and 5 merchant vessels with coal for the Navy. A detailed classification of the month's traffic is included with this report.

The Panama Canal net tonnage of the 266 commercial vessels aggregated 951,345 tons, 94,547 tons greater than for July. Their registered gross tonnage was 1,208,471, and registered net tonnage, 770,320. The total cargo carried was 1,040,740 tons of 2,240 pounds, 153,926 tons greater than for the preceding month. Of this total for August, 1,638 tons were carried as deck cargo. The total number of vessels and craft

of all kinds through the Canal was 301, as compared with 258 last month. The total tolls earned for August were $936,209.44, as compared with $842,312.05 in July. The average toll-paying vessels per day was 8.65, and the average tolls per vessel, $3,493.32. Tolls collected amounted to $929,574.44.

The average tonnage, Panama Canal measurement, per vessel was 3,576; United States net equivalent, 2,941; registered gross, 4,543; and registered net, 2,896. The average cargo carried by the laden vessels was 4,752 tons.

The United States coastwise trade for August included 17 vessels with a total Panama Canal net tonnage of 70,632, and cargo of 55,169 tons. There were 8 vessels from the Atlantic to the Pacific with a total tonnage of 27,388 and cargo of 24,351 tons; and from the Pacific to the Atlantic Coast 9 vessels with a total tonnage of 43,244 and cargo of 30,818 tons.

PRINCIPAL COMMODITIES.

Bulk shipments of whole cargoes of the different principal commodities included in the August traffic were:

FROM ATLANTIC TO PACIFIC.

Commodity.	No. of cargoes.	Tons.	Total tons.	From—	To—
Fuel oil	2	19,400	.....	Tampico	Balboa.
Fuel oil	2	15,761	.....	Tampico	Pisagua.
Fuel oil	1	9,500	.....	Tampico	San Francisco.
Fuel oil	1	9,000	.....	Tampico	Taltal.
Fuel oil	1	3,000	.....	Tampico	Talara.
Fuel oil	2	18,600	.....	Puerto Lobos	Antofagasta.
Fuel oil	2	13,578	.....	Puerto Lobos	Pisagua.
Fuel oil	2	21,840	.....	Beaumont, Tex	Far East.
Fuel oil	1	12,000	.....	Puerto Blanco	Oleum, Cal.
Fuel oil	1	2,123	124,802	Portsmouth, England	Acapulco, Mex.
Coal	2	6,349	.....	Newport News	Mejillones.
Coal	3	6,557	.....	Norfolk	Antofagasta.
Coal	1	7,000	.....	Norfolk	Valparaiso.
Coal	1	6,957	.....	Norfolk	Mejillones.
Coal	1	5,632	.....	Norfolk	Balboa.
Coal	1	3,624	36,119	New York	Chile.
Kerosene and gasoline	1	10,046	.....	Sabine, Tex	China.
Kerosene and gasoline	1	8,525	.....	Beaumont, Tex	China.
Kerosene and gasoline	1	8,066	.....	Philadelphia	Japan.
Kerosene and gasoline	1	3,300	29,937	Tampico, Mex	Antofagasta.
Coke	1	2,742	.....	Baltimore	San Antonio, Chile.
Coke	1	2,549	5,291	Pensacola	Valparaiso.
Bones	1	2,433	.....	Rio Janeiro	San Francisco.
Bones	1	2,300	4,733	Buenos Aires	San Francisco
Fuel briquettes	1	125	.....	Norfolk	Callao.
Fuel briquettes	1	2,933	3,058	Norfolk	Iquique.
Creosote	1	.....	8,600	England	Seattle.
Silver sand	1	.....	9,000	Antwerp	San Francisco
Machinery	1	.....	8,221	New York	Japan.

FROM PACIFIC TO ATLANTIC.

Nitrate	3	10,523	.....	Iquique	Savannah, Ga.
Nitrate	2	7,500	.....	Iquique	Boston.
Nitrate	1	4,300	.....	Iquique	European port.
Nitrate	1	3,611	.....	Iquique	Philadelphia.
Nitrate	1	3,600	.....	Iquique	Porto Rico.
Nitrate	1	3,409	.....	Iquique	Norfolk.
Nitrate	1	2,662	.....	Iquique	Baltimore.
Nitrate	2	7,200	.....	Antofagasta	New Orleans.
Nitrate	1	8,600	.....	Antofagasta	Philadelphia.
Nitrate	1	6,600	.....	Antofagasta	United Kingdom.
Nitrate	1	6,089	.....	Antofagasta	Savannah, Ga.
Nitrate	1	5,550	.....	Antofagasta	Wilmington, Del.
Nitrate	1	4,760	.....	Antofagasta	Charleston, S. C.
Nitrate	1	3,241	.....	Taltal	Porto Rico.
Nitrate	1	7,069	.....	Taltal	France.
Nitrate	1	3,149	.....	Taltal	New York.
Nitrate	1	3,140	.....	Taltal	New Orleans.
Nitrate	2	12,551	.....	Valparaiso	New York.
Nitrate	1	7,200	.....	Valparaiso	United Kingdom.
Nitrate	1	9,028	.....	Mejillones	Pensacola.
Nitrate	1	5,958	.....	Mejillones	Liverpool.
Nitrate	1	2,800	.....	Mejillones	Norfolk.
Nitrate	1	9,560	.....	Tocopilla	Alexandria, Egypt.
Nitrate	1	4,216	.....	Tocopilla	Jacksonville.
Nitrate	1	6,032	148,338	Caleta Buena	European port.
Wheat	4	30,148	.....	Portland	United Kingdom.
Wheat	1	7,547	37,695	Tacoma	London.
Flour	1	7,100	.....	Tacoma	Alexandria, Egypt.
Flour	1	3,497	.....	Tacoma	New York.

FROM PACIFIC TO ATLANTIC—continued.

Commodity.	No. of cargoes.	Tons.	Total tons.	From—	To—
Flour	1	6,811	.....	Seattle	New York.
Flour	1	6,750	.....	Astoria	New York.
Flour	1	6,739	30,897	Portland	United Kingdom.
Cold storage food products	3	21,261	.....	Wellington	London.
Cold storage food products	1	5,290	.....	Sydney	London.
Cold storage food products	1	3,742	30,293	Lyttleton	London.
Sugar	1	9,278	.....	Formosa	New Orleans.
Sugar	1	7,500	.....	Philippines	New York.
Sugar	1	7,126	.....	Philippines	Philadelphia.
Sugar	1	5,200	29,104	Kobe	New Orleans.
Chrome ore	1	8,406	.....	Noumea	New York.
Chrome ore	1	7,300	15,706	Sydney	New York.
Railroad ties	1	.....	8,260	Vancouver	West Hartlepool.
Coal	1	.....	7,648	Vancouver	Rio de Janeiro.
Lubricating oil	1	.....	7,367	San Francisco	United Kingdom.
Crude oil	1	.....	1,145	Corinto, Nicaragua	Ceiba, Cuba.

LATIN-AMERICAN TRAFFIC.

Commercial vessels through the Canal en route to the west coast of Central and South America were classified as follows:

Nationality.	No. of ships.	Registered gross tonnage.	Registered net tonnage.	Panama Canal net tonnage.	Cargo.
					Tons.
British	29	98,375	57,925	69,921	62,578
American	25	92,268	60,041	71,008	84,658
Chilean	6	15,645	10,177	11,889	9,316
Norwegian	4	22,157	15,060	16,808	26,049
Peruvian	4	11,172	6,215	6,968	3,278
Mexican	2	2,559	1,659	2,638	Ballast
Costa Rican	2	530	388	370	112
Dutch	1	6,899	4,417	6,653	3,373
French	1	5,681	3,600	4,081	1,091
Danish	1	3,766	2,302	3,558	5,632
Total	75	259,052	161,784	193,894	196,087

Fifteen of the above vessels, including 7 British tugs, with an aggregate Panama Canal net tonnage of 22,988 were in ballast; 6 from United States ports, 6 from European ports, 1 from Cristobal, and 2 from Mexican ports. Seven vessels, with a total Panama Canal net tonnage of 5,514, carrying 3,693 tons of cargo, were bound for Central American ports; the remainder for South American west coast ports. The registry of the vessels, the kind and quantity of their cargo and its destination are shown below:

No. vessels	Registry.	Tons cargo.	Commodity.	Total commodity	Destined to—
13	British	.....	General	38,697	South American west coast ports.
3	British	.....	Fuel oil	17,000	South American west coast ports.
1	British	.....	Case oil	3,300	South American west coast ports.
9	British	.....	Ballast	.....	South American west coast ports.
10	United States	.....	General	17,388	South American west coast ports.
5	United States	.....	Fuel oil	43,739	South American west coast ports.
5	United States	.....	Coal	15,307	South American west coast ports.
2	United States	.....	Coke	5,291	South American west coast ports.
1	United States	.....	Briquettes	2,933	South American west coast ports.
2	United States	.....	Ballast	.....	South American west coast ports.
2	Chilean	.....	General	1,504	South American west coast ports.
1	Chilean	.....	Coal and general	7,770	South American west coast ports.
1	Chilean	.....	Steel	42	South American west coast ports.
2	Chilean	.....	Ballast	.....	South American west coast ports.
2	Peruvian	.....	General	1,930	South American west coast ports.
1	Peruvian	.....	Coal	1,223	South American west coast ports.
1	Peruvian	.....	Briquettes	125	South American west coast ports.
2	Norwegian	.....	Fuel oil	18,600	South American west coast ports.
1	Norwegian	.....	Coal	6,957	South American west coast ports.
1	Norwegian	.....	Dynamite	492	South American west coast ports.
1	Dutch	.....	General	3,373	South American west coast ports.
1	French	.....	General	1,091	South American west coast ports.
1	Danish	.....	Coal	5,632	South American west coast ports.
2	British	.....	General	1,458	Cen. American west coast ports.
1	British	.....	Fuel oil	2,123	Cen. American west coast ports.
2	Costa Rican	.....	General	112	Cen. American west coast ports.
2	Mexican	.....	Ballast	.....	Cen. American west coast ports.
75	.....	.....	.....	196,087	.....

The Latin-American traffic from the west coast of Central and South America for August is classified in the following tabulation:

Nationality.	No. of ships.	Registered gross tonnage.	Registered net tonnage.	Panama Canal net tonnage.	Cargo.
					Tons.
United States	36	130,992	86,301	98,986	115,602
British	24	89,313	54,320	69,267	69,082
Norwegian	3	20,970	13,278	15,282	Ballast.
Peruvian	3	12,666	6,614	8,315	8,090
Chilean	2	13,059	5,253	6,624	3,807
French	2	11,228	7,431	8,795	13,047
German	2	7,654	4,619	6,938	7,987
Costa Rican	2	316	186	370	395
Spanish	1	4,600	3,625	3,166	6,032
Jugoslav	1	3,185	2,034	2,254	4,300
Totals	76	293,983	183,661	219,997	228,342

Twelve of the above vessels were in ballast. This traffic included 8 oil tankers, 3 barges, and 1 tug. Six of the 76 vessels, totaling 4,537 tons, Panama Canal net measurement, and carrying 3,597 tons of cargo, were from Central American ports; the remaining 70 were from South American ports. This traffic is further classified in the following statement:

No. vessels	Registry.	Tons cargo.	Commodity.	Total commodity.	Destined to—
1	American	612	General		Cristobal.
2	American	8,992	General	9,604	United States Atlantic ports
1	American		Lubricating oil	7,367	Cristobal.
18	American	82,358	Nitrate		United States Atlantic ports.
2	American	6,841	Nitrate	89,199	Porto Rico.
2	American		Nitrate and general	7,445	United States Atlantic ports.
1	American		Fuel oil	1,145	Cuba.
1	American		Manganese and copper ore	842	United States Atlantic ports.
3	American		Ballast		Cristobal.
5	American		Ballast		Mexico.
17	British	31,598	General		Cristobal.
1	British	2,626	General	34,224	United States Atlantic ports.
1	British	5,550	Nitrate		United States Atlantic ports
3	British	19,758	Nitrate		European ports.
1	British	9,550	Nitrate	34,858	Egypt.
1	British		Ballast		London.
3	Norwegian		Ballast		Mexico.
3	Peruvian		General	8,090	Cristobal.
1	Chilean	3,536	General		United States Atlantic ports.
1	Chilean	271	General	3,807	Cristobal.
1	French		General	5,978	European ports.
1	French		Nitrate	7,069	European ports.
1	German		General	7,987	European ports.
1	German		Ballast		European ports.
2	Costa Rican		Logs and sacks	395	Cristobal.
1	Spanish		Nitrate	6,032	European ports.
1	Jugoslav		Nitrate	4,300	European ports.
76				228,342	

Fifty-nine of the vessels passing through the Canal during August were under control of the United States Shipping Board, combining a total Panama Canal net tonnage of 222,283 and carrying 315,576 tons of cargo. Thirty-two were northbound with a total tonnage of 119,534 and cargo of 172,605 tons; 27 were southbound with a tonnage of 102,749 and cargo of 142,971 tons.

Statements attached to this report show the distribution of the cargo through the Canal this month (see pages 108, 109, 110, and 111); the tabulation following gives the classification of the traffic according to the principal trade routes:

	Total vessels.			Vessels in ballast.	
	Vessels.	Panama Canal net tonnage.	Cargo.	Vessels.	Panama Canal net tonnage.
Atlantic to Pacific.					
East coast United States to west coast of South America	28	84,240	77,224	5	19,504
East coast of United States to Far East	21	97,820	141,705	1	[1]77,700
Cristobal to west coast of South America	15	18,897	8,692	1	105
Europe to west coast of United States	12	48,659	28,547	6	20,373
Europe to west coast of South America	12	36,908	23,702	6	741
Mexico to west coast of South America	11	48,125	82,639		

[1] Displacement tonnage, 7,700.

	Total vessels.			Vessels in ballast.	
	Vessels.	Panama Canal net tonnage.	Cargo.	Vessels.	Panama Canal net tonnage.
Atlantic to Pacific—Continued.					
Europe to Australia and New Zealand	9	54,542	53,397	1	5,563
United States coastwise	8	27,388	24,351	2	5,114
East coast of United States to Australia and New Zealand	5	29,347	37,000	.....	.....
Cristobal to west coast of Central America	4	1,768	1,570	.....	.....
Mexico to west coast of United States	2	10,536	21,500	.....	.....
East coast of United States to British Columbia	2	10,764	17,473	.....	.....
East coast of South America to west coast of United States	2	4,429	4,753	.....	.....
Mexican coastwise	2	2,638	.....	2	2,638
Canada to Australia and New Zealand	1	6,457	5,500	.....	.....
East coast of United States to Philippine Islands	1	6,266	7,800	.....	.....
Cristobal to west coast of United States	1	2,163	1,681	.....	.....
Europe to west coast of Mexico	1	1,108	2,123	.....	.....
Canada to west coast of South America	1	188	125	.....	.....
East coast of United States to Tahiti	1	151	180	.....	.....
Cuba to west coast of South America	1	22	12	.....	.....
Miscellaneous (1 yacht and 2 launches of over 10 tons gross registry)	3	88	.....	3	88
Total	143	492,504	539,954	27	61,826
Pacific to Atlantic.					
West coast of South America to United States	25	72,244	110,507	.....	.....
West coast of South America to Cristobal	17	21,878	14,115	3	535
West coast of South America to Europe	16	65,095	76,365	1	231
West coast of United States to Europe	10	49,686	77,699	.....	.....
Australia and New Zealand to Europe	9	59,787	56,186	.....	.....
United States coastwise	9	43,244	30,818	3	21,189
West coast of South America to Mexico	8	42,959	.....	8	42,959
Far East to east coast of United States	8	34,438	52,027	.....	.....
West coast of Central America to Cristobal	4	1,768	1,610	.....	.....
Australia and New Zealand to United States	3	15,346	19,066	.....	.....
West coast of United States to Mexico	2	10,424	.....	2	10,424
Philippine Islands to United States	2	9,755	14,626	.....	.....
West coast of South America to Porto Rico	2	3,384	6,841	.....	.....
British Columbia to east coast of United States	1	5,624	7,648	.....	.....
West coast of South America to Egypt	1	5,309	9,550	.....	.....
West coast of United States to Egypt	1	5,141	7,100	.....	.....
British Columbia to Europe	1	5,167	8,260	.....	.....
Philippine Islands to Cuba	1	4,401	6,135	.....	.....
West coast of Central America to Cuba	1	2,316	1,145	.....	.....
West coast of Central America to United States	1	453	842	.....	.....
Tahiti to United States	1	422	246	.....	.....
Total	123	458,841	500,786	17	75,338

SERVICES TO CANAL SHIPPING.

Miscellaneous repairs were made at Cristobal and Balboa shops and dry docks on 126 vessels and craft during August; 82 at Cristobal and 44 at Balboa. Of these, 17 were dry-docked, 6 at Cristobal and 11 at Balboa. Bunker coal in the amount of 35,118 tons was supplied to 127 commercial vessels; 28,829 tons to 106 vessels at Cristobal, and 6,289 tons to 21 vessels at Balboa. Twenty commercial vessels were furnished a total of 34,018 barrels of fuel oil, all of which were supplied from Balboa. There were 313 vessels supplied with 14,345,592 gallons of water; 211 at Cristobal with 11,242,092 gallons, and 102 at Balboa with 3,103,500 gallons. Sales of commissary supplies to commercial vessels other than those of the Panama Railroad Steamship Line aggregated $99,078.73, including $3,986.69 for laundry service; these sales were made to 175 vessels at Cristobal in the amount of $65,842.44, and to 109 vessels at Balboa in the amount of $33,236.29. Charges for tug service for vessels using the Canal and the terminal ports totaled $25,898.75, of which $16,296.45 was earned at Cristobal and $9,602.30 at Balboa.

STATEMENT OF OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Canal are shown in the following tabulation:

Item.	Cristobal.	Balboa.	Total.
Commercial vessels passing through the Canal	143	123	266
Net tonnage of above commercial vessels, Panama Canal measurement	492,504	458,841	951,345
United States equivalent net tonnage of commercial vessels	407,935	374,482	782,417
Registered gross tonnage of commercial vessels	622,073	586,398	1,208,471
Registered net tonnage of commercial vessels	396,312	374,008	770,320
Cargo through the Canal in commercial vessels, tons of 2,240 pounds	539,954	500,786	1,040,740
Deck load cargo included in above	661	977	1,638

Item.	Cristobal.	Balboa.	Total.
Nationality of commercial ships through the Canal:			
British	50	37	87
Chilean	6	2	8
Chinese	1	.....	1
Costa Rican	2	2	4
Danish	1	.....	1
Dutch	1	.....	1
French	6	2	8
German	.....	2	2
Japanese	8	4	12
Jugoslav	.....	1	1
Mexican	2	.....	2
Norwegian	5	3	8
Panamanian	1	.....	1
Peruvian	4	3	7
Spanish	.....	1	1
Swedish	.....	1	1
United States	56	65	121
Totals	143	123	266
Panama Canal net tonnage of commercial vessels by nationality:			
British	185,144	143,915	329,059
Chilean	11,889	6,624	18,513
Chinese	1,501	.....	1,501
Costa Rican	370	370	740
Danish	3,558	.....	3,558
Dutch	6,653	.....	6,653
French	15,894	8,795	24,689
German	.....	6,938	6,938
Japanese	33,383	19,400	52,783
Jugoslav	.....	2,254	2,254
Mexican	2,638	.....	2,638
Norwegian	22,435	15,282	37,717
Panamanian	18	.....	18
Peruvian	6,698	8,315	15,283
Spanish	.....	5,166	5,166
Swedish	.....	5,032	5,032
United States	202,053	238,750	440,803
Totals	492,504	458,841	951,345
United States equivalent net tonnage of commercial vessels by nationality:			
British	151,848	112,842	264,690
Chilean	9,226	4,565	13,791
Chinese	1,302	.....	1,302
Costa Rican	344	344	688
Danish	2,301	.....	2,301
Dutch	4,250	.....	4,250
French	15,339	8,213	23,552
German	.....	4,622	4,622
Japanese	29,671	17,844	47,515
Jugoslav	.....	1,951	1,951
Mexican	2,169	.....	2,169
Norwegian	20,324	13,321	33,645
Panamanian	18	.....	18
Peruvian	3,987	4,010	7,997
Spanish	.....	2,877	2,877
Swedish	.....	4,612	4,612
United States	167,154	199,281	366,435
Totals	407,933	374,482	782,415
Registered gross tonnage of commercial vessels by nationality:			
British	235,962	177,332	413,294
Chilean	15,645	13,059	28,704
Chinese	1,962	.....	1,962
Costa Rican	530	316	846
Danish	3,766	.....	3,766
Dutch	6,899	.....	6,899
French	19,360	11,228	30,588
German	.....	7,654	7,654
Japanese	43,837	25,744	69,581
Jugoslav	.....	3,185	3,185
Mexican	2,559	.....	2,559
Norwegian	29,250	20,970	50,220
Peruvian	11,172	12,666	23,838
Spanish	.....	4,600	4,600
Swedish	.....	5,706	5,706
United States	251,131	303,938	555,069
Totals	622,073	586,398	1,208,471
Registered net tonnage of commercial vessels by nationality:			
British	145,504	111,687	257,191
Chilean	10,177	5,253	15,430
Chinese	1,209	.....	1,209

Item.	Cristobal.	Balboa.	Total.
Registered net tonnage of commercial vessels by nationality—Continued.			
Costa Rican	388	186	574
Danish	2,302	.....	2,302
Dutch	4,417	.....	4,417
French	15,002	7,431	22,433
German	.....	4,619	4,619
Japanese	29,048	17,499	46,547
Jugoslav	.....	2,034	2,034
Mexican	1,659	.....	1,659
Norwegian	19,539	13,278	32,817
Peruvian	6,215	6,614	12,829
Spanish	.....	3,625	3,625
Swedish	.....	3,513	3,513
United States	160,852	198,269	359,121
Totals	396,312	374,008	770,320
Cargo carried by commercial vessels by nationality:			
British	170,045	146,452	316,497
Chilean	9,316	3,807	13,123
Chinese	2,600	.....	2,600
Costa Rican	112	395	507
Danish	5,632	.....	5,632
Dutch	3,373	.....	3,373
French	1,501	13,047	14,548
German	.....	7,987	7,987
Japanese	47,150	29,327	76,477
Jugoslav	.....	4,300	4,300
Norwegian	35,049	.....	35,049
Peruvian	3,278	8,090	11,368
Spanish	.....	6,032	6,032
Swedish	.....	7,493	7,493
United States	261,898	273,856	535,754
Totals	539,954	500,786	1,040,740
Tolls levied against commercial vessels by nationality:			
British	$182,424.27	$140,452.15	$322,876.42
Chilean	11,232.15	5,706.25	16,938.40
Chinese	1,627.50	.....	1,627.50
Costa Rican	430.00	430.00	860.00
Danish	2,876.25	.....	2,876.25
Dutch	5,312.50	.....	5,312.50
French	14,924.65	10,066.80	24,991.45
German	.....	5,644.50	5,644.50
Japanese	40,610.70	22,016.05	62,626.75
Jugoslav	.....	2,438.75	2,438.75
Mexican	1,899.36	.....	1,899.36
Norwegian	25,405.00	11,003.04	36,408.04
Panamanian	29.50	.....	29.50
Peruvian	4,975.60	5,012.50	9,988.10
Spanish	.....	3,596.25	3,596.25
Swedish	.....	5,765.00	5,765.00
United States	201,671.37	230,659.30	432,330.67
Totals	$493,418.85	$442,790.59	$936,209.44
Vessels passing through the Canal free of tolls:			
U. S. Navy battleships	.....	6	6
U. S. Navy mine sweepers	2	.....	2
U. S. Navy Eagle boats	1	1	2
U. S. Navy submarines	3	2	5
U. S. Navy subchaser	1	.....	1
U. S. Navy destroyers	2	.....	2
U. S. Navy tugs	2	1	3
U. S. Navy colliers	3	2	5
U. S. Army transport	1	.....	1
U. S. Army tug	1	.....	1
U. S. Coast Guard cutter	1	.....	1
U. S. Navy supply ship	.....	1	1
Totals	17	13	30
Yachts, ocean-going, passing through the Canal	3	.....	3
Net tonnage of above, Panama Canal measurement	88	.....	88
Total ocean-going vessels passing through the Canal	160	136	296
Launches passing through the Canal	4	1	5
Net tonnage of above, Panama Canal measurement	9	5	14
Total vessels and craft passing through the Canal	164	137	301
Cargo carried by government vessels on which no tolls were charged	25,298	300	25,598
Commercial vessels through the Canal without cargo but not in ballast	1	1	2
Net tonnage of above, Panama Canal measurement	4,904	3,388	8,292
Commercial vessels through the Canal in ballast	27	17	44
Net tonnage of above, Panama Canal measurement	61,826	75,338	137,164
Motor vessels through the Canal	8	4	12
Net tonnage of above, Panama Canal measurement	9,061	508	9,569
Sailing vessels through the Canal	5	.....	5
Net tonnage of above, Panama Canal measurement	10,261	.....	10,261

Item.	Cristobal.	Balboa.	Total.
Tolls levied on laden vessels through the Canal	$446,518.75	$388,110.40	$834,629.15
Tolls levied on vessels in ballast through the Canal	42,893.10	54,676.44	97,569.54
Tolls levied on displacement tonnage through the Canal	3,925.00	.....	3,925.00
Tolls levied on ocean-going yachts through the Canal	74.10	.....	74.10
Tolls levied on launches through the Canal	7.90	3.75	11.65
Total tolls levied	$493,418.85	$442,790.59	$936,209.44
Total vessels entering port, including Canal transit	321	294	615
Total vessels clearing port, including Canal transit	322	286	608
Total vessels entered and cleared	643	580	1,223
Registered gross tonnage of vessels entering port	1,625,995	1,388,640	3,014,635
Registered gross tonnage of vessels clearing port	1,625,474	1,365,560	2,991,034
Total for vessels entering and clearing	3,251,469	2,754,200	6,005,669
Net registered tonnage of vessels entering port	1,071,814	928,515	2,000,329
Net registered tonnage of vessels clearing port	1,072,307	911,576	1,983,883
Total for vessels entering and clearing	2,144,121	1,840,091	3,984,212
Vessels entering port but not passing through the Canal	65	4	69
Gross tonnage of vessels entering port but not passing through the Canal	313,730	13,364	327,134
Net tonnage of above	190,799	10,126	200,925
Vessels clearing port but not passing through the Canal	59	4	63
Gross tonnage of above	292,925	12,463	305,388
Net tonnage of above	177,954	8,285	186,239
Vessels passing through the Canal and handling passengers or cargo at port:			
Entering	39	48	87
Gross tonnage of above	171,301	157,729	329,030
Net tonnage of above	104,587	96,198	200,785
Vessels passing through Canal and handling passengers or cargo at port:			
Clearing	38	46	84
Gross tonnage of above	173,558	150,608	324,166
Net tonnage of above	106,834	91,809	198,643
Transit cargo arriving ... tons	1,029,136	1,055,182	2,084,318
Transit cargo cleared ... tons	1,048,445	979,498	2,027,943
Total transit cargo ... tons	2,077,581	2,034,680	4,102,261
Local cargo arriving ... tons	30,286	22,234	52,520
Local cargo slipped ... tons	5,151	487	5,638
Total local cargo ... tons	35,437	22,721	58,158
Cargo received for transshipment ... tons	33,209	386	33,595
Cargo transshipped ... tons	27,923	313	28,236
Total cargo arriving ... tons	1,092,631	1,077,802	2,170,433
Total cargo cleared ... tons	1,081,519	980,298	2,061,817
Cargo received by Receiving and Forwarding Agency, P. R. R. ... tons	62,346	5,850	68,196
Cargo dispatched by Receiving and Forwarding Agency, P. R. R. ... tons	48,445	1,097	49,542
Cargo rehandled by Receiving and Forwarding Agency, P. R. R. ... tons	3,706	235	3,941
Total cargo handled by Receiving and Forwarding Agency, P.R.R. tons	114,497	7,182	121,679
Cargo stevedored, included in above ... tons	57,152	1,254	58,406
Commercial vessels other than Panama Railroad supplied with bunker coal	98	21	119
Coal supplied above vessels ... tons	27,603	6,289	33,892
Panama Railroad vessels supplied with bunker coal	8	.....	8
Coal supplied above vessels ... tons	1,226	.....	1,226
U. S. Army vessels supplied with bunker coal	8	1	9
Coal supplied above vessels ... tons	158	21	179
Total vessels supplied with bunker coal from Panama Railroad deposits	114	22	136
Total coal furnished above vessels ... tons	28,987	6,310	35,297
Coal supplied Panama Canal departments ... tons	935	.....	935
Coal supplied U. S. Army, excepting vessels ... tons	118	.....	118
Coal supplied The Panama Canal ... tons	1,536	808	2,344
Coal supplied individuals and companies ... tons	621	.....	621
Total coal furnished from Panama Railroad deposits ... tons	32,197	7,118	39,315
Coal received during August ... tons	41,184	.....	41,184
Coal on hand, September 1, 1920 ... tons	37,393	6,035	43,428
Coal on hand, August 1, 1920 ... tons	28,406	13,153	41,559
Coal—U. S. Navy Account.			
Coal furnished U. S. Navy, including vessels ... tons	5,901	3,832	9,733
Coal on hand, September 1, 1920 ... tons	61,961	19,865	81,826
Coal on hand, August 1, 1920 ... tons	67,862	23,697	91,559
Commercial vessels other than Panama Railroad supplied with fuel oil from Panama Canal tanks	.....	20	20
Fuel oil sold to above vessels ... barrels	.....	34,018	34,018
Fuel oil issued to U. S. Navy ... barrels	204	.....	204
Fuel oil issued to Canal departments ... barrels	6,520	22,696	29,216
Fuel oil sold to individuals and companies ... barrels	1,233	4,873	6,106
Total fuel oil furnished from Panama Canal tanks ... barrels	7,957	61,587	69,544

Item.	Cristobal.	Balboa.	Total.
Fuel oil received during August ... barrels	10,548	125,793	136,341
Fuel oil on band, September 1, 1920 ... barrels	15,944	87,379	103,323
Fuel oil on hand, August 1, 1920 ... barrels	13,353	23,173	36,526
Other oil pumped for individuals and companies ... barrels	240,995	28,714	269,709
Diesel oil on hand, September 1 ... barrels	.....	1,110	1,110
Vessels supplied with water	211	102	313
Water sold to above vessels ... gallons	11,242,092	3,103,500	14,345,592
Vessels on which miscellaneous repairs were made	82	45	127
Vessels dry-docked	6	11	17
Commercial vessels furnished commissary supplies	175	109	284
Panama Railroad vessels furnished commissary supplies	14	.....	14
Other U. S. Government vessels supplied with commissary supplies	21	20	41
Total vessels furnished commissary supplies	210	129	339
Commissary sales to commercial vessels:			
Ice	$2,303 65	$887.75	$3,191.40
Wholesale groceries	12,571.81	5,801.01	18,372.82
Wholesale cold storage	45,258.36	23,573.17	68,831.53
Laundry	3,227.05	759.64	3,986.69
Miscellaneous	2,481.57	2,214.72	4,696.29
Totals	$65,842.44	$33,236.29	$99,078.73
Commissary sales to Panama Railroad vessels:			
Ice	$267.20	.....	$267.20
Wholesale groceries	2,786.76	.....	2,786.76
Wholesale cold storage	8,007.88	.....	8,007.88
Laundry	2,001.62	.....	2,001.62
Miscellaneous	651.07	.....	651.07
Totals	$13,714.53	.....	$13,714.53
Commissary sales to other government vessels:			
Ice	$112,24	$304,38	$416.62
Wholesale groceries	798.38	1,617.81	2,416.19
Wholesale cold storage	8,560 32	10,080.02	18,640.34
Laundry	966,07	.....	966.07
Miscellaneous	585.20	5.47	590.67
Totals	$11,022 21	$12,007.68	$23,029.89
Total commissary sales to all vessels	$90,579.18	$45,243 97	$135,823.15
Passengers arriving, including transit passengers:			
First cabin	3,233	1,564	4,797
Other than first cabin	3,758	3,212	6,970
Totals	6,991	4,776	11,767
Passengers departing, including transit passengers:			
First cabin	3,578	1,402	4,980
Other than first cabin	4,415	3,060	7,475
Totals	7,993	4,462	12,455
Total movement of passengers	14,984	9,238	24,222
Passengers disembarking:			
First cabin	1,505	206	1,711
Other than first cabin	1,197	104	1,301
Totals	2,702	310	3,012
Passengers embarking:			
First cabin	1,844	139	1,983
Other than first cabin	1,854	77	1,931
Totals	3,698	216	3,914
Services to American seamen:			
Seamen shipped	282	151	433
Seamen paid off	237	121	358
Seamen deserted	14	8	22
Seamen deceased	.....	1	1
Seamen lodged and subsisted	24	19	43
Seamen repatriated	35	2	37
Wages of American seamen:			
Total amount earned	$17,386.07	$22,618.42	$40,004.49
Deductions approved by Deputy Shipping Commissioner	4,754.05	7,445.28	12,199.33
Balance due seamen	$12,632.02	$15,173.14	$27,805.16
Paid to seamen	$6,838.36	$12,267.62	$19,105.88
Received on deposit for seamen	5,793.66	[1]5,027.05	10,820.71

[1] Includes $2,440 immigration deposits.

Item.	Cristobal.	Balboa.	Total.
Services to American vessels:			
Crew shipped	1	.....	1
Crew paid off	1	.....	1
Shipping article written	1	.....	1
Marine notes of protest noted	15	6	21
Bills of health issued	162	153	315
Clearances issued	155	146	301

LOCK OPERATION.

Lockages of commercial vessels for August were as follows:

	Number of lockages.			Number of vessels.		
	North.	South.	Total.	North.	South.	Total.
Gatun	110	129	239	120	148	268
Pedro Miguel	115	135	250	119	146	265
Miraflores	116	135	251	119	146	265

All lockages, including Army and Navy vessels, those of the Panama Railroad and The Panama Canal, are shown in the following statement of lockages for August:

Lockages.	Gatun.	Pedro Miguel.	Miraflores.
Commercial	239	250	251
Noncommercial, Army and Navy	16	21	23
Noncommercial, Canal equipment	13	21	20
Total	268	292	294
Commercial	268	265	265
Noncommercial, Army and Navy	37	40	39
Noncommercial, Canal equipment	30	50	54
Totals	335	355	358

The total consumption of water for lockages during August was 2,985,560,000 cubic feet. The consumption by locks was as follows:

	Gatun.	Pedro Miguel.	Miraflores.
	Cubic feet.	*Cubic feet.*	*Cubic feet.*
Lockage	1,109,670,000	965,730,000	910,160,000
Leakage	20,000,000	80,830,000	59,000,000
Maintenance	.....	.....	30,270,000
Totals	1,129,670,000	1,046,560,000	999,430,000

METEOROLOGY.

The total rainfall for the month in the Canal Zone and vicinity ranged from 5.86 inches at Taboga to 27.45 inches at Porto Bello. The greatest amount of rainfall recorded on any one day was 8.57 inches at Porto Bello on the 19th.

The estimated August rainfall over the Gatun Lake watershed was 13.57 inches, compared with a 10-year mean of 11.77 inches. In the Chagres River watershed above Alhajuela it was 17.54 inches, compared with a 19-year mean of 14.52 inches. The Chagres River discharge at Alhajuela was 3,597 c. f. s., being 19 per cent above the 19-year August average of 3,018 c. f. s., and furnished 41 per cent of the Gatun Lake total yield. The maximum momentary discharge for the month was 16,200 c. f. s. at elevation 99.05 feet on the 3d, and the minimum discharge was 2,020 c. f. s. on the 27th.

The Gatun Lake watershed total yield was 8,748 c. f. s., being 15 per cent above the 10-year mean of 7,599 c. f. s. The maximum August yield since the existence of Gatun lake was 11,656 c. f. s. in 1917, and the minimum total yield was 4,956 c. f. s. in 1911. The net yield for the month was 8,353 c. f. s. The maximum net yield for the 10 years of record was 11,089 c. f. s. in 1917, and the minimum net yield was 4,437 c. f. s. in 1919. Gatun lake varied from a maximum elevation of 85.74 feet to a minimum elevation of 85.49 feet, averaged 85.60 feet and ended at 85.59 feet midnight the 31st. The consumption of 1,669 c. f. s. at the hydroelectric plant was the heaviest on record. The draft on the lake for lockages and power was the heaviest on record during Canal operation, being 2,444 c. f. s., as compared with 2,295 c. f. s. for the preceding month, and 2,101 c. f. s. for August, 1919. The ratio of water used for hydroelectric power and lockages was 2 15 to 1.

Miraflores Lake varied from a maximum elevation of 54.46 feet on the 15th to a minimum elevation of 51.85 feet on the 31st, ended at 51.96 feet midnight the 31st.

Miraflores Lake was lowered approximately 2 feet on the 30th of the month to allow the replacing of fender timbers on the upper Miraflores lock.

ELECTRICAL DIVISION.

Gatun hydroelectric station—The gross output of this station for August was 6,111,-200 KWH on a computed water consumption of 4,469,210,000 cubic feet.

Miraflores steam plant—The gross output of this plant was 16,020 KWH with an oil consumption of 2,006.28 barrels. This plant was operated for stand-by purposes only.

Total power output—The total gross output of both stations was 6,127,220 KWH. The total loss of power in plant auxiliaries, transmission, and transformation was 1,067,735 KWH., or 17.4 per cent of gross output.

There were 25 operations of the Gatun spillway during August. There were no interruptions to transmission line service during the month. The regular operation and maintenance was carried on at all substations without any extraordinary occurrences.

STATUS OF CONSTRUCTION WORK.

	Per cent completed.	
	July.	August.
E-503 Installation of 4 K-5 switches at Miraflores substation	62	62
E-519 Installation of two 1,000-ampere, K-12 switches, Cristobal substation	80	80
E-420 Installation of new 8,400 KVA transformer and 3 new tie line equipments in Gatun substation	8	20
E-509 Installation of 2 complete feeder equipments at Balboa substation	95	95
E-400 Installation of three 400,000 cm. 3-conductor, lead-covered cables as tie lines between Gatun hydroelectric and substation	20	50

SHOP, FOUNDRY, AND DRY DOCK WORK.

The reconstruction of the steamship *Marne* at Balboa proceeded with good results during the month. The "tween decks" deck of the ship, the poop and forecastle structures and about half of the upper deck have been replaced in the ship after the steel work comprising same had been removed and reworked in the shop. The main turbine of the ship was given a preliminary run under steam at reduced speed in the shop on August 30. This turbine ran satisfactorily after overhaul and partial rebuilding, although it has been through a severe fire, afterwards submerged for a month, then sustained the shock of a near-by explosion and was again submerged for a month. Overhaul of the auxiliary machinery of the *Marne* is about 75 per cent completed.

The Japanese steamship *Koyo Maru* was docked on August 21, for repairs to her bottom. She had run on a coral reef and remained with her bow hung on the rocks for about a month before the wreckers could release her. The bottom is badly damaged for about 70 feet abaft the stem and the rebuilding of this portion of the vessel will take about a month.

In the past few weeks a considerable amount of important turbine repairs have been carried out at Balboa shops. In addition to naval installations, the past few years have produced an increasing proportion of marine turbine installations on commercial vessels so that a modern marine plant must count upon handling an increasing proportion of this character of work. An effort has been made both to provide experienced turbine mechanics as well as to develop talent within the Mechanical Division. The successful completion of various turbine jobs brought to the Balboa plant evidences that the Mechanical Division can take care of this work without difficulty, except that certain kinds of special material are not kept on hand and the shop is not equipped for cutting reduction gears.

Repairs were satisfactorily completed to the crank shaft of the steamship *Silverado* and the turbine of the steamship *Westward Ho.* Work for the United States Navy was carried out on submarines *R-22*, *R-26*, *R-27*, *Tacoma*, Eagle *No. 14*, Eagle *No. 32*, U. S. subchaser *V-12*, U. S. submarines *R-21* to *R-27*, inclusive, U. S. S. *Parrott* and U. S. S. *Poe*. In addition to these, the following vessels received miscellaneous repairs at the Balboa plant: *Diablo*, *Marne*, *La Habra*, *Adria*, *Westward Ho. S. V. Harkness*, *Loretta*, *Meton*, *Craincreek*, *Orteric*, *Glenpool*, *Coalinga*, *F. D. Asche*, *Koyo Maru*, *Otho*, *Caddo*, *Calera*, *Argus*, *Talaralite*, *Bradford*, *Tannenberg*, *Pomona*, *Lake Gormania*, *Point Bonita*, *Willie A. Higgins*, *Cordelia*, *Bellepline*, schooner *Rosanna*, Mexican gunboat *Progresso*, tender *Perico* and dredge *Culebra*.

The more important ship repairs at the Cristobal plant included the following: Jacked up furnaces, made patches for furnace and boiler front after electric welding on the steamship *Walter Hardcastle;* renewed plates in shell and bulkheads and changed propeller of the steamship *Nemesis;* repaired condenser and rebricked

boilers of the steamship *Springfield;* the boilers of the steamship *Chile* were repaired and electric welded, and her reversing engine and auxiliaries repaired; the schooner *Tahitian Maiden*, barges *Nos. 27, 29, 105*, and *109*, tug *Porto Bello* were given repairs, as were also the following steamships: *Tres Hermanos, Point Lobos, Cathlamet, Henry Steers, Eastern Admiral, Dunclutha, Chinampa, Newport, Eastern Pilot, Urubamba, Effingham, Loraine, Salvador, Parismina, Lake Gormania, Domato, Benjamin Brewster, Mantaro, Lake Fitch, Ruapehu, Peru, Crijnssen, Costigan, Favorite, Balboa, National Bridge, Lake Fansdale, Lake Granby, Springfield, Heredia, Metapan, Orca, Minnequa, Puerto Rico, General Gorgas, Ancon, Cristobal, Colon, Allianca, Calamares, Point Bonita, General Hodges, General Goethals, Ulysses, Advance, Maricopa, City of Joliet, Jamaica, Acajutla, Ucayoli, Teviot, Panama, Ernst, Caribbean, Achilles*, and U. S. S. Eagle *No. 32*, U. S. S. *Owl*, U. S. S. *Orion*, U. S. S. *Morris*, U. S. S. *Tern*, U. S. S. *Kingfisher*, U. S. S. *Lap Wing*, U. S. A. T. *South Bend*, tugs *Mabyn, Engineer, St. Finbarr, Einigkeit*, and *Tavernilla*, barge *No. 109*, U. S. barge *No. 308*, schooner *Linda S.*, U. S. M. P. *Graham*, motor ship *Rosana* and barge *Darien*.

The output of the Mechanical Division in patterns, castings, and other foundry production for August, as compared with the preceding month, is shown below:

	August.			July.		
	Patterns.	Castings.	Pounds.	Patterns.	Castings.	Pounds.
Iron	37	1,362	95,064	39	1,538	103,719
Steel	11	.....	.....	11	609	64,756
Brass	25	1,205	23,756	14	1,378	20,402

The ordinary repair and maintenance work of the Mechanical Division for August included among other items the following:

Cars repaired	1,828
Locomotives and cranes repaired	1,173
Passenger coaches packed, cleaned, oiled, and inspected	3,900
Freight cars repacked	359
Locomotives hostled	1,670
Cranes hostled	232
Locomotives ridden	81
Locomotives inspected	101
Crews instructed in handling locomotives	15
Crews instructed in oil and fuel economy	31
Crews instructed in air brakes	9
Cranes, locomotive, inspected	32
Locomotives shopped for repairs	24
Steamshovels inspected	3
Locomotive spreaders inspected	2

BUILDING CONSTRUCTION.

The following statement represents the degree of completion, August 31, of the more important construction work by the Building Division:

	Per cent completed.
Colon stables:	
East half—	
Six stables	(1)
One latrine	100
West half—	
Six stables	90
Five wagon sheds	[2]90
One feed room	60
One shop building	60
Silver townsite, Mount Hope—	
Commissary	90
Twelve 12-family married quarters	100
Eight 12-family married quarters	95
Six 12-family married quarters	90
Three 12-family married quarters	80
Two 12-family married quarters	75
Four 12-family married quarters	70
Four 12-family married quarters	50
Two 32-room bachelor quarters	25
Two 32-room bachelor quarters	20
Cristobal incinerator	(3)
Combination shop and storehouse, Cristobal	82
Royal Mail Steam Packet Company's office, Cristobal	49
Oil tank (55,000 barrels capacity), Cristobal	100
Moving and re-erecting 2 type-7 houses from Las Cascadas to Gatun	100
Applying Specification roofing, Pier No. 6, Cristobal	75
Lighthouse, end of East Breakwater, Cristobal	90
National Catholic War Council Building, Balboa	50
Oil tank (55,000 barrels capacity), Balboa	90
Bake shop, workroom, and storage room building, Ancon Hospital	78

[1] Completed except plastering. [2] No work done during month. [3] Completed except overhead cranes.

	Per cent completed.
Alterations, Ancon restaurant	100
Demolition of old French pier at La Boca	100
Moving four 4-family quarters from Las Cascadas to Quarry Heights	98
Moving house No. 47, Las Cascadas to La Boca	100
Moving old Ancon school building to Balboa	65
Construction of 6 transformer houses, Silver City	50
Repair Dredging Division store, Paraiso	60
Concreting floor, Paraiso store	65

Building construction for the Army and Navy is separately reported.

DREDGING DIVISION.

The general movement of material in Cucaracha slide diminished during the latter part of the month. Two dipper dredges, one working one-half and the other the entire month, removed from the slide area a total of 160,100 cubic yards of earth and rock, all of the dredging being within the proposed basin at the foot of the slide. A good channel was maintained during the month, with no interference to Canal traffic.

Including the excavation for the month of August, the dredges have removed a total of 1,890,800 cubic yards of earth and rock from this area since the slide of February 22, 1920. It is estimated that 55,000 cubic yards of material were sluiced from Cucaracha slide and 1,500 cubic yards from barge repair slide by graders *Nos. 1* and *3* during the month. The total excavation by dredges during August was 493,520 cubic yards, as follows:

Cubic yards.	Classified as— Earth.	Rock.	Character of work.	Stations.	Equipment
				Cucaracha Slide.	
(1) 80,800	20,200	60,600	Maintenance	1805-00 to 1814-00 E	*Gamboa.*
(1) 79,300	19,800	59,500	Maintenance	1805-00 to 1814-00 E	*Cascadas.*
				Barge Repair Slide.	
(1) 47,600	27,600	20,000	Maintenance	1738-00 to 1757-00 W	*Paraiso.*
				East Culebra Slide.	
2(1) 34,800	10,500	24,300	Maintenance	1775-00 to 1788-00 E	*Paraiso.*
				West Culebra Slide.	
(1) 3,000	800	2,200	Maintenance	1804-00 to 1805-00 W	*Paraiso.*
				East Lirio.	
(1) 4,200	2,000	2,200	Maintenance	1722-00 to 1725-00 E	*Paraiso.*
				Gaillard Cut.	
(1) 92,000	77,000	15,000	Maintenance	1814-00 to 1824-00 E. and W. 1839-50 to 1842-00 E. and W.	*No. 86.*
(3) 113,000	113,000	.....	Maintenance	Balboa Inner Harbor	*No. 84.*
(3) 5,000	5,000	.....	Maintenance	Balboa Inner Harbor	*No. 84.*
(4) 29,820	29,820	.....	Aux. construction	Chagres River gravel beds	*Marmot.*
(4) 4,000	4,000	.....	Aux. construction	Chagres River gravel beds	*Marmot.*
493,520	309,720	183,800			

[1] Gaillard Cut. [2] This dredge rehandled 15,400 cubic yards of earth and 36,000 cubic yards of rock from north of Gold Hill (East Culebra slide) for which no credit is given in the above table. [3] Balboa inner harbor. [4] Chagres River.

The excavated material was dumped as follows:

	Cubic yards.
Canal north of Gold Hill	350
Rio Grande valley	92,000
North of Gamboa	401,170
Total	493,520

The following excavation remained to be done on September 1:

Location.	Earth.	Rock.	Total.
	Cu. yds.	*Cu. yds.*	*Cu. yds.*
Gaillard Cut	.....	25,000	25,000
Pacific entrance	47,500	82,900	130,400
Total, Canal prism	47,500	107,900	155,400
Cristobal coaling station	.....	2,100	2,100
Balboa inner harbor	99,850	13,400	113,250
Total, ocean to ocean	147,350	123,400	270,750

MUNICIPAL ENGINEERING DIVISION.

This division had construction work as itemized below in progress during August, with completion on September 1, as shown:

Northern District.

	Per cent completed.
Municipal work, New Cristobal townsite:	
Grading	95
Roads	[1] 97½
Water lines	[1] 72
Sidewalks	[1] 86
Sanitary sewers	[1] 75
Grading, fill, and general municipal work, new silver townsite, Mount Hope:[1]	
Grading and fill	90
Streets and roads	99
Water lines	99
Sewers, sanitary	95
Sewers, storm	98
Sidewalks	(2)
Municipal work, 7th and 9th and "G" and "K" streets, Colon:[1]	
Grading	35
Roads	96
Water lines	99
Sidewalks	90
Sanitary sewers	90
Alleyways	100
Road to new incinerator, Mount Hope	100
Roads, for west half, Colon stables	[1] 99
Installation of water and sewer system, new Panama Railroad station, Gatun	[1] 99
Construction of sidewalks on Lighthouse and Telephone Row, Gatun	[1] 30
Municipal work, Block 53, Colon:	
Roads	80
Tracks	5
Water lines	95
Sanitary sewers	98
Storm drains	80
Installation of sewer in area between 9th and 10th streets, Colon	[1] 95
Installation of sewer, new Cristobal incinerator	60
Construction of water tank at Camp Bierd	90
Connecting new concrete oil tank at Mount Hope to pumping plant manifold	75

Southern District.

Municipal work for 4 type-14 houses, Quarry Heights	[1] 15
New road, Balboa to Diablo Hill	100
Municipal work, Catholic Community Building, Balboa	[1] 25
Sewer and water lines for Central and South American Telegraph Co	100
Storm sewer, Javillo Fill	99
Sewer, Northern Avenue to beach	[1] 99.1
Box sewer, Panama Railroad yards	96
Demolition of Calidonia bridge	98
Concreting Panama Tramway tracks, Calidonia crossing	100
Concreting streets, new Santo Tomas Hospital	65
Municipal work for 3 type-18 houses, Balboa	[1] 60

[1] No work done during the month. [2] Not started.

The total output of all pumping stations for August was 598,914,825 gallons; and that of the 3 filtration plants, 477,394,000 gallons. The consumption in Panama City was 83,685,000 gallons, and that for Colon 57,144,000 gallons. Sales of water to 313 vessels at Balboa and Cristobal totaled 14,345,592 gallons. There were 2,716 tons of garbage and 13 dead animals disposed of at the Gavilan Island incinerator during August. The collection of garbage in the Ancon-Balboa district was taken over by the Municipal Division during the month.

WORKING FORCE.

(Effective August 18, 1920.)

Department or Division.	Gold.	Silver.	Total.
Operation and Maintenance:			
Office	35	38	73
Building Division	405	1,172	1,577
Electrical Division	237	267	504
Municipal Engineering	113	1,118	1,231
Lock Operation	167	579	746
Dredging Division	185	1,145	1,330
Mechanical Division	1,031	1,740	2,771
Marine Division	194	475	669
Fortifications	71	364	435
Totals	2,438	6,898	9,336
Supply Department:			
Quartermaster	218	1,771	1,989
Subsistence	41	392	433
Commissary	314	1,609	1,923
Cattle Industry—Plantations	28	469	497
Hotel Washington	11	91	102
Totals	612	4,332	4,944

Department or Division.	Gold.	Silver.	Total
Accounting	252	10	262
Health Department	252	833	1,085
Executive Department	561	228	789
Panama Railroad:			
Superintendent	77	567	644
Transportation	150	191	341
Receiving and Forwarding Agency	101	1,136	1,237
Coaling Stations	126	839	965
Totals	454	2,733	3,187
Grand total	4,569	15,034	19,603

OCCUPATION OF QUARTERS.

Occupants of Panama Canal and Panama Railroad quarters on August 31, were classified as follows:

	Men.	Women.	Children.	Total.
Americans	3,665	2,074	2,532	8,271
Europeans	137	29	60	226
West Indians	4,894	1,990	3,951	10,835
Totals	8,696	4,093	6,543	19,332

PUBLIC HEALTH.

One hundred and ninety-five cases of malaria, with 1 death, were reported for August. There were 32 cases of influenza and 2 deaths. Pneumonia caused 22 deaths, 19 of which were from Panama and 3 from Colon. Two cases of diphtheria and 4 cases of chickenpox were reported. One case of leprosy was transferred to Palo Seco. Four cases of typhoid fever were reported, 1 of which was a nonresident; there were no deaths from typhoid. A case of scarlet fever was reported from Colon.

RECEIPTS AND SALES OF MATERIALS AND SUPPLIES.

The total value of the material ordered on United States requisitions and received on the Isthmus during August was $863,218.39. Of these receipts, $807,357.87 was chargeable to Operation and Maintenance, $34,216.92 to construction and equipment, and $21,706.60 to miscellaneous departments.

The total cash sales on the Isthmus from storehouses and obsolete stores amounted $192,760.05, of which $182,402.47 was for stock material, including $138,649.85 for fuel oil; $5,757.18 for scrap material, and $4,600.40 for obsolete second-hand material.

Sales to steamships from storehouses for August amounted to $51,555.74, of which $13,246.29 was for miscellaneous stock items and $38,309.45 for fuel oil. Total sales of commissary supplies to all purchasers for August amounted to $1,004,474.36, made up as follows: To steamships other than United States Government vessels and those of the Panama Railroad Steamship Line, $98,874.94; to The Panama Canal, $138,916.37; to the United States Government, including the Army and Navy, $106,806.51; to individuals and companies, mainly through charge accounts to the retail commissaries, $34,307.22; to the Panama Railroad, including its steamships and the Hotel Washington, $32,138.97, and to individuals purchasing coupons, $593,430.35.

FINANCIAL RECEIPTS AND EXPENDITURES.

The cash balance in Canal appropriations on August 31, exclusive of fortifications, was $19,050,868.15. The balance in fortification funds allotted to The Panama Canal was $1,535,762.82. Payments from appropriations made by the Disbursing Clerk, Washington, amounted to $983,980.75, and by the paymaster on the Isthmus, to $1,663,441.16. Purchases of commissary books from the Panama Railroad Company amounted to $373,836.31.

Collection of tolls on the Isthmus totaled $929,574.44. Deposits of $175,910 were made with the Assistant Treasurer of the United States to be applied in payment of tolls and other charges against vessels using the Canal. The total Panama Canal collections on the Isthmus were $2,237,062.85 and collections by the Disbursing Clerk, Washington, $194,988.63. Receipts from Canal Zone and miscellaneous funds were $178,222.75; disbursements from the same source were $219,062.61. August payrolls on the Isthmus aggregated $1,355,536.35, as compared with $1,365,070.82 for July, a decrease of $9,536.47 from last month.

Respectfully,

CHESTER HARDING.
Governor.

Distribution of Cargo Passing Through the Canal

From—	Per cent of total cargo.	North America. United States. North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total United States.	Atlantic terminus.	West Indies.	Total, North America.
South America:								
Chile	39.1	48,705	37,347	19,369	105,421	19,960	6,841	132,222
Colombia	0.4	.....	.....	.....	.....	2,191	.....	2,191
Ecuador	0.6	.....	.....	.....	.....	2,747	.....	2,747
Peru	2.6	1,571	.....	.....	1,571	6,243	.....	7,814
West coast, South America [1]	1.5	3,536	.....	.....	3,536	2,185	.....	5,721
Total, South America	44.3	53,812	37,347	19,369	110,528	33,326	6,841	150,695
North America:								
Pacific Coast, United States	23.2	30,818	.....	.....	30,818	.....	.....	30,818
West coast, Canada	3.2	.....	.....	.....	.....	.....	.....	.....
Central America	0.7	987	.....	.....	987	1,452	1,145	3,584
West coast, North America [1]	0.1	.....	.....	.....	.....	.....	.....	.....
Total, North America	27.2	31,805	.....	.....	31,805	1,452	1,145	34,402
Asia:								
China	2.7	13,588	.....	.....	13,588	.....	.....	13,588
Japan	2.7	4,000	.....	6,695	10,695	.....	.....	10,695
Indo-China and Malay Peninsula	1.7	1,016	.....	.....	1,016	.....	7,306	8,322
Philippine Islands and East Indies	4.3	16,489	.....	4,088	20,577	.....	.....	20,577
Other Asiatic ports [1]	3.1	9,829	.....	.....	9,829	.....	5,757	15,586
Total, Asia	14.5	44,922	.....	10,783	55,705	.....	13,063	68,768
Australasia:								
Australia	2.4	4,291	.....	.....	4,291	.....	.....	4,291
New Zealand	7.7	39	.....	.....	39	.....	.....	39
Australasia [1]	3.7	14,706	.....	.....	14,706	.....	.....	14,706
Total Australasia	13.8	19,036	.....	.....	19,036	.....	.....	19,036
Tahiti and other Pacific islands	....	276	.....	.....	276	.....	.....	276
Grand totals	100.0	149,851	37,347	30,152	217,350	34,778	21,049	273,177
Per cent of total cargo	....	29.9	7.4	6.0	43.4	6.9	4.2	54.5

[1] General cargo not routed so as to allow segregation among various ports.

Distribution of Cargo Passing Through the Canal

From—	Per cent of total cargo.	South America. Chile.	Colombia.	Ecuador.	Peru.	West coast of South America.	Total, South America.	North America. West coast of United States.	Canadian Pacific ports.	Mexico.	West coast of Central America.	Pacific terminus of the Panama Canal.	West coast of North America.	Total, North America.
North America:														
United States:														
North Atlantic ports	33.7	11,255	1,039	192	331	16,570	29,387	25,210	8,626	.....	.....	.....	.....	33,836
South Atlantic ports	10.5	39,947	.....	.....	1,910	.....	41,857	.....	.....	.....	.....	.....	.....	.....
Gulf ports	13.1	2,549	.....	.....	.....	1,507	4,056	.....	.....	.....	.....	.....	.....	.....
Total, U. S.	57.3	53,751	1,039	192	2,241	18,077	75,300	25,210	8,626	.....	.....	.....	.....	33,836
Atlantic terminus of the Panama Canal	2.3	2,604	2,719	1,699	1,930	.....	8,952	1,722	.....	.....	1,578	.....	.....	3,300
Mexico, Gulf ports	19.3	60,259	.....	.....	3,000	.....	63,259	21,500	.....	.....	.....	19,400	.....	40,900
West Indies	.....	.....	.....	12	.....	.....	12	.....	.....	.....	.....	16	.....	16
Canada, Atlantic ports	1.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, North America	79.9	116,614	3,758	1,903	7,171	18,077	147,523	48,432	8,626	.....	1,578	19,416	.....	78,052

from the Pacific to the Atlantic, August, 1920.

Europe.											
British Isles.	France.	Germany.	Holland.	Spain and Portugal.	Other European.	Total, Europe.	Africa.	East coast, South America.	Grand totals.	Per cent of total cargo.	From—
											South America:
24,829	5,978	1,524	.....	6,032	15,900	54,263	9,550	.....	196,035	39.1	Chile.
.....	.....	.....	.....	.....	.....	.....	.....	.....	2,191	0.4	Colombia.
15	507	.....	.....	.....	.....	524	.....	.....	3,271	0.6	Ecuador.
5,187	.....	.....	.....	.....	.....	5,187	.....	.....	13,001	2.6	Peru.
1,940	.....	.....	.....	.....	.....	1,940	.....	.....	7,661	1.5	West coast, South America
31,971	6,487	1,524	.....	6,032	15,900	61,914	9,550	.....	222,159	44.3	Total, South America.
											North America:
67,999	.....	977	2,013	.....	7,367	78,356	7,100	.....	116,274	23.2	Pacific Coast, United States.
8,352	.....	.....	.....	.....	.....	8,352	.....	7,647	15,999	3.2	West coast, Canada.
.....	.....	.....	.....	.....	13	13	.....	.....	3,597	0.7	Central America.
455	.....	.....	.....	.....	.....	455	.....	.....	455	0.1	West coast, North America
76,806	.....	977	2,013	.....	7,380	87,176	7,100	7,647	136,325	27.2	Total, North America
											Asia:
.....	.....	.....	.....	.....	.....	.....	.....	.....	13,588	2.7	China.
2,000	.....	.....	.....	.....	1,020	3,020	.....	.....	13,715	2.7	Japan.
.....	.....	.....	.....	.....	.....	.....	.....	.....	8,322	1.7	Indo-China and Malay Pen.
1,000	.....	.....	.....	.....	.....	1,000	.....	.....	21,577	4.3	Philippine Islands and E. Indies
.....	.....	.....	.....	.....	.....	.....	.....	.....	15,586	3.1	Other Asiatic ports.
3,000	.....	.....	.....	.....	1,020	4,020	.....	.....	72,788	14.5	Total, Asia.
											Australasia:
7,805	.....	.....	.....	.....	.....	7,805	.....	.....	12,096	2.4	Australia.
38,532	.....	.....	.....	.....	.....	38,532	.....	.....	38,571	7.7	New Zealand.
3,865	.....	.....	.....	.....	.....	3,865	.....	.....	18,571	3.7	Australasia.
50,202	.....	.....	.....	.....	.....	50,202	.....	.....	69,238	13.8	Total, Australasia.
.....	.....	.....	.....	.....	.....	.....	.....	.....	276	.....	Tahiti and other Pacific islands
161,979	6,487	2,501	2,013	6,032	24,300	203,312	16,650	7,647	500,780	100.0	Grand totals.
32.3	1.3	0.5	0.4	1.2	4.8	40.6	3.3	1.5	100.0	.....	Per cent of total cargo.

from the Atlantic to the Pacific, August, 1920.

Asia.						Australasia.							
China.	Japan.	Indo-China and Malay Peninsula.	Philippine Islands and East Indies.	East Asiatic ports.	Total, Asia.	Australia.	New Zealand.	Australasia.	Total, Australasia.	Tahiti.	Grand totals.	Per cent of total cargo.	From—
													North America: United States—
4,886	53,467	80	15,986	21,581	96,000	11,819	7,321	3,700	22,840	180	182,243	33.7	North Atlantic ports.
1,995	.....	.....	530	.....	2,525	630	11,504	.....	12,134	....	56,516	10.5	South Atlantic ports.
43,123	8,395	547	.....	7,460	59,525	7,000	.....	.....	7,000	....	70,581	13.1	Gulf ports.
50,004	61,862	627	16,516	29,041	158,050	19,449	18,825	3,700	41,974	180	309,340	57.3	Total, U. S.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	12,252	2.3	Atlantic terminus of the Panama Canal.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	104,159	19.3	Mexico, Gulf ports.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	28	.....	West Indies.
.....	.....	.....	.....	.....	.....	.....	.....	5,500	5,500	....	5,500	1.0	Canada, Atlantic ports.
50,004	61,862	627	16,516	29,041	158,050	19,449	18,825	9,200	47,474	180	431,279	79.9	Total, North America.

Distribution of Cargo Passing Through the Canal

From—	Per cent of total cargo.	South America.						North America.						
		Chile.	Colombia.	Ecuador.	Peru.	West coast of South America.	Total, South America.	West coast of United States.	Canadian Pacific ports.	Mexico.	West coast of Central America.	Pacific terminus of the Panama Canal	West coast of North America.	Total, North America.
Europe:														
British Isles...	16.3	14,780	.....	.....	3,966	4,393	23,139	12,329	800	2,123	.....	.....	1,100	16,352
France.....	0.3	1,091	.....	.....	.....	.....	1,091	410	.....	.....	.....	.....	.....	410
Holland.....	2.3	3,373	.....	.....	.....	62	3,435	9,000	.....	.....	.....	.....	.....	9,000
Norway and Sweden.....	0.1	492	.....	.....	.....	.....	492	.....	.....	.....	.....	.....	.....	.....
European pts.[1]	0.2	.....	.....	.....	.....	1,398	1,398	.....	.....	.....	.....	.....	.....	.....
Total, Europe.	19.2	19,736	.....	.....	3,966	5,853	29,555	21,739	800	2,123	.....	.....	1,100	25,762
South America:														
East coast....	0.9	.....	.....	.....	.....	.....	.....	4,733	.....	.....	.....	.....	.....	4,733
Grand totals	100.0	136,350	3,758	1,903	11,137	23,930	177,078	74,904	9,426	2,123	1,578	19,416	1,100	108,547
Per cent of total cargo..	.....	25.3	0.7	0.4	2.1	4.4	32.8	13.9	1.8	0.4	0.3	3.6	0.2	20.1

[1] General cargo not routed so as to allow segregation among various ports.

The Fuel Situation.

THE PANAMA CANAL, DEPARTMENT OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., October 2, 1920.

To all steamship agents—Attention is again invited to the serious shortage of coal at the Isthmus. Greatly increased effort must be made by steamship agents to obtain coal outside the Canal Zone. In this connection, attention is invited particularly to the following communications received regarding supplies in Caribbean ports:

St. Thomas, Sept. 3—Stock of coal 8th, 5,000 tons. Present stock of oil booked; expecting 7,000 tons, 13th which partly booked.

Westindian Company.

San Juan, Porto Rico, Oct. 1—Stock bunker coal at present 7,600 tons.

Yager, Governor.

Habana, Cuba, Sept. 28—Fuel oil situation unchanged since last report.[1] Bunker coal available to-day approximately 30,000 tons; replacement arrivals expected.

Harris, Consul.

In addition to the above, the Marine Superintendent is in receipt of information that coal may now be obtained at Lota, Chile, when arranged for in advance.

Very soon The Panama Canal will have to refuse to bunker vessels for the round trip to west coast South American ports, and it is suggested that steamship agents make prompt arrangements accordingly. Vessels coming to the Isthmus from Genoa or other Mediterranean ports must be bunkered, either at Norfolk or in the Caribbean prior to arrival at the Isthmus, as The Panama Canal will be unable to furnish the amount of coal called for by such vessels. Please consider this advance notice.

The following additional messages on the fuel situation have been received since the date of my last circular:

Washington, Sept. 30—Shipping Board advises have about 40,000 barrels oil at Honolulu for own use; expect supply at St. Thomas about first week in October and about 25,000 barrels due to arrive Iquique about October 1st.

Pancanal.

Salina Cruz, Mexico, Sept. 16—Seventeen thousand barrels fuel oil available to-day. Present receipts at rate of 40,000 barrels monthly; normal requirements 12,000 monthly; apparent surplus nearly 30,000 barrels monthly but amount receipts can not be guaranteed.

Burlingham.

E. P. JESSOP,
Marine Superintendent.

[1] See my circular Sept. 10th.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, Pancanal, Washington."

from the Atlantic to the Pacific, August, 1920.—Continued.

Asia.						Australasia.						Per cent of total cargo.	From—
China.	Japan.	Indo-China and Malay Peninsula.	Philippine Islands and East Indies.	East Asiatic ports.	Total, Asia.	Australia.	New Zealand.	Australasia.	Total, Australasia.	Tahiti.	Grand totals.		
													Europe:
.....	.....	.....	.....	.....	.....	22,118	26,205	.....	48,323	....	87,814	16.3	British Isles.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	1,501	0.3	France.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	12,435	2.3	Holland.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	492	0.1	Norway and Sweden.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	1,398	0.2	European ports.[2]
.....	.....	.....	.....	.....	.....	22,118	26,205	.....	48,323	....	103,640	19.2	Total, Europe.
													South America:
.....	302	....	.....	.....	302	.....	.....	.....	.....	....	5,035	0.9	East coast.
50,004	62,164	627	16,516	29,041	158,352	41,567	45,030	9,200	95,797	180	539,954	100.0	Grand totals.
9.2	11.5	0.1	3.1	5.4	29.3	7.7	8.3	1.7	17.7	....	100.0	.....	Per cent of total cargo.

Ships at Canal Repair Shops.

The following vessels were at Balboa shops for repairs during the week ended October 2:

Submarines *R–21* and *R–27*, periodical overhaul; steamship *Marne*, general repairs; dredge *No. 83*, general repairs; motor ship *Borgland*, minor repairs to engines; launch *Captain Wilhelm*, hull repairs and installation of new engine; motor ship *Maricopa*, engine repairs; steamships *Westboro*, engine repairs; *Achilles*, engine and hull repairs and repairs to bow where damaged while traversing cut; *Hodges*, general repairs; motor ships *Parthia*, repairs to auxiliary air compressor engine; *Balcatta*, minor light engine repairs; barges *Nos. 121* and *102*, for conversion into garbage scows; barges Nos. *131* and *66*, general repairs.

The following vessels were at Cristobal shops for repairs during the week ended October 4, 1920:

Steamships *Colon*, miscellaneous repairs and painting to engine, deck, and steward departments; *Eastern Victor*, make new h. p. packing; *Bonham*, install ballast in forward hold; *Eurana*, repair sanitary and circulating pump; *Newport*, repair generator engine and governor; U. S. N. oil barge *No. 11*, clean and paint, repair tanks and hull; steamships *Ucayali*, electric weld hawse pipes and hatch coamings, etc; *Astmahco III*, repair main engine, ice machine, generator engine, pumps, donkey boiler, etc; dredge *Gamboa*, boiler washout and general repairs; U. S. S. *C–285*, overhaul main and auxiliary engines; U. S. S. *R–25*, repair and alter engine foundation; steamships *Cartago*, *Haiti*, *Consuelo*, U. S. S. *Falcon*, *Van Rensaeller*, *Pacific*, *Lake Hector*, U. S. S. *Eagle No. 34*, minor repairs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending October 2, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Acajutla.....	Pacific Steam Navigation Co.....	September 25.	September 26.	.....	2
Guatemala.....	Pacific Steam Navigation Co.....	September 26.	September 26.	30	.....
Newport.....	Pacific Mail Steamship Co.....	September 28.	September 29.	163	.....
Balcatta.....	Pacific Motor Ship Co.....	September 30.	.....	682	.....
Jamaica.....	Pacific Steam Navigation Co.....	October 1.....	October 1.....	1	.....

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight October 2, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship	Arrived at port		Entered Canal		Completed transit		Cleared for sea		Nationality	Line	Length	Beam	Salt water draft	From—	For—	Cargo		Panama Canal tonnage	
	Day	Hour	Day	Hour	Day	Hour	Day	Hour								Nature	Tons	Gross	Net
Acajutla	18	14.10	26	6.15	26	12.28	26	16.30	British	Pacific Steam Navigation Co.	215.7	33.5	14.6	Cristobal	Champerico	General	753	1,273	706
Cordelia	25	19.37	26	6.22	26	14.44	26	15.55	British	Union Oil Co.	420.0	54.0	28.0	Tampico	Talta!	Crude oil	9,000	6,690	4,971
Naugus	25	15.12	26	6.30	26	16.32	27	10.32	American	Barber Line (S. B.)	402.6	53.0	27.0	New York	Yokohama	General	8,065	6,583	4,873
Renacio	25	18.10	26	7.20	26	15.30	26	16.30	Chilean	South American Steamship Line.	412.0	50.5	26.5	New York	Valparaiso	General	3,734	6,050	3,442
Manavi	22	18.20	27	6.15	27	14.22	27	15.30	British	Pacific Steam Navigation Co.	216.0	35.0	13.6	Cristobal	Guayaquil	General	637	1,357	884
Tenpaisan Maru	26	14.07	27	6.17	27	14.26	27	15.30	Japanese	Mitsui & Co.	380.0	54.0	23.5	Tampa	Kobe	Phosphates	6,613	5,560	3,609
Allianca	23	6.47	27	6.33	27	13.19	27	14.00	American	Panama Railroad Steamship Line	335.0	42.0	16.6	New York	Guayaquil	General	544½	4,120	2,670
Gen. Faidherbe [1]	24	19.50	27	7.17	27	18.26	29	16.15	French	Soc. Gen. de Armement	276.6	40.3	13.0	Nantes	San Francisco	Ballast		2,267	1,968
R-21 and R-27 [2]			27	7.40	27	15.00			American	United States Navy				Coco Solo	Balboa				
Sailor No. 1688	24		27	16.00	27	17.35	29	20.00	Panaman	T. Agrio				Cristobal	Gatun Lake	Ballast		1	1
Alsace	27	19.30	28	6.10	28	13.39	28	14.30	French	A. D. Bordes	400.0	52.1	14.0	New York	Iquique	Ballast		5,879	4,156
Santa Paula	27	19.57	28	6.10	28	14.32	28	15.30	American	W. R. Grace & Co.	420.0	53.0	27.4	Norfolk	Talcahuano	(5)	5,919	6,744	4,825
Steel Exporter	28	5.30	28	7.10	28	14.55	28	22.10	American	Isthmian Steamship Line	424.0	56.0	21.0	New York	Seattle	General	4,797	7,539	5,448
Huasco	24	19.53	28	8.05	28	15.30	28	19.52	Chilean	South American Steamship Line.	379.7	44.3	22.0	Cristobal	Valparaiso	General	706	4,552	3,182
Eastern Glen	28	12.25	28	9.45	28	17.21	28	18.13	American	Thorndyke & Fennell (S. B.)	399.0	54.0	24.0	New York	San Pedro	General	4,300	6,132	4,330
La Cabiria [3]	7	15.05	27	12.00	28	15.31	28	16.30	Panaman	Bernardo Bergaro				Cristobal	Balboa	Ballast		18	18
Santa Teresa	28	14.32	29	6.10	29	13.14	29	14.15	American	W. R. Grace & Co.	360.2	51.6	22.6	New York	Valparaiso	General	2,412	5,726	4,086
Tainui	29	9.15	29	10.47	29	18.15	30	19.37	British	Shaw Saville & Albion Co.	477.0	61.0	26.0	London	Auckland	General	6,000	10,631	7,606
West Camak	29	18.00	30	6.20	30	13.29	30	14.45	American	E. C. Evans & Sons (S. B.)	410.5	54.0	20.0	London	San Pedro	General	1,000	6,622	4,880
Benjamin Brewster	29	22.15	30	6.58	30	15.15	30	21.30	American	Standard Oil Co.	411.6	53.4	24.4	Tampico	Pisagua	Petroleum	7,100	6,360	4,337
Helder	29	14.45	30	11.32	30	18.15	1	7.31	Dutch	Royal Netherland Steamship Co.	361.0	49.0	16.3	Amsterdam	Corral	General	3,050	5,117	3,807
Cauca	5	17.08	1	6.21	1	12.56	1	14.57	British	Pacific Steam Navigation Co.	246.0	35.6	15.6	Cristobal	Guayaquil	General	552	1,582	1,023
Fultala	30	9.36	1	6.22	1	13.57	1	14.57	British	British India Steam Nav. Co.	366.0	48.0	21.6	Calcutta	Adelaide	General	3,650	4,637	2,981
Tascalusa	30	23.00	1	6.50	1	14.30	1	15.30	British	Standard Transportation Co.	419.0	54.0	27.6	Beaumont	Hongkong	Refined oil	8,317	6,647	4,573
Lehigh	1	7.10	1	7.40	1	16.35	1	17.35	American	North Atlantic Steamship Co.	390.0	54.2	21.0	Philadelphia	Seattle	General	3,800	6,106	4,346
City of Newcastle	1	9.47	1	12.50	1	19.47	1	20.55	British	Hall Line, Ltd.	436.0	56.4	25.8	New York	Brisbane	General	6,216	8,310	6,279
Lapwing [4]	24	17.35	2	6.32	2	14.17	2	16.00	American	United States Navy	187.0	37.0	12.0	Norfolk	San Diego	Ballast			
Albion Star	2	6.20	2	7.55	2	15.48	2	23.27	British	Albion Star Steamship Co.	450.0	58.5		Barry	Auckland	Coal	5,996	8,317	5,531
Port Augusta	2	6.10	2	10.58	2	18.27	2		British	Anglo-Aust. Navigation Co.	380.6	49.1	22.1	New York	Sydney	General	6,800	5,273	3,909

[1] Bark. [2] Submarines. [3] Launch. [4] And barges Nos. 23 and 309. [5] Oil, naphtha, cement, machinery, and general.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Adria	7-22	22.00	26	6.35	26	14.55			American	Universal Shipping & Trading Co	272.8	49.3	22.9	Seattle	Cape Town	Lumber	1,596	3,249	2,133
Mineola	26	12.10	26	8.27	26	16.00	26	18.00	American	W. R. Grace & Co.	298.6	40.0	21.6	Samanco	New York	Sugar	3,134	2,835	1,822
Jaunty	25	18.00	26	8.37	26	15.40			British	British Admiralty	155.1	31.1	13.0	Iquique	Cristobal [6]	Ballast		683.35	209

[6] For orders.

Orita	26	3.00	26	9.08	26	17.20	27	10.10	British	Pacific Steam Navigation Co.	485.4	58.2	28.6	Punta Arenas	Liverpool	General	6,759	9,921	6,692
Aviles	26	7.30	26	9.40	26	18.20	27	12.43	Spanish	General Navigation Co.	370.0	41.2	23.6	Mejillones	Cristobal [6]	Nitrates	4,000	3,687	2,467
Guatemala	26	2.30	26	10.49	26	18.45	3	11.15	British	Pacific Steam Navigation Co.	359.3	43.3	17.9	Valparaiso	Cristobal	Merchandise	2,032	4,210	2,744
Nevada	26	12.30	26	13.46	26	21.50	30	16.05	Danish	United Steamship Co.	361.0	50.2	26.3	Tocopilla	U. S. port	Nitrates	6,496	4,990	3,558
Ruahine	26	14.45	27	6.46	27	14.50	27	15.20	British	New Zealand Shipping Co.	480.6	60.3	29.0	Wellington	London	Cold storage, etc	5,510	11,197	8,322
Mosella	26	13.15	27	7.10	27	15.35	27	15.35	American	McCormick & McPherson (S. B.)	402.6	53.0	25.3	San Francisco	Leith	Barley	7,149	6,580	4,894
Pilar de Larrinaga	26	16.30	27	7.41	27	16.00	27	17.45	British	Larrinaga & Co.	445.0	58.0	28.0	Portland	Hull	Wheat	9,500	.....	.....
Kia Ora	26	22.00	27	7.52	27	16.55	28	18.25	British	Shaw, Saville & Albion Co.	448.3	56.5	25.6	New Castle	London	Frozen, general	10,000	8,237	5,771
Devon	27	3.00	27	8.46	27	17.50	27	20.40	British	Federal Steam Navigation Co.	473.3	59.9	26.0	Adelaide	Boston	Frozen, general	5,504	9,944	7,000
Craincreek	27	4.30	27	9.37	27	18.45	28	11.25	American	Warren Transportion Co. (S. B.)	253.5	43.8	20.0	Iquique	Matanzas	Nitrates	2,799	2,385	1,500
Haarlem	27	2.00	28	6.49	28	15.05	28	19.30	Dutch	Royal Netherland Steamship Co.	361.2	49.0	21.0	Antofagasta	Delfzyl	Nitrate, general	5,400	4,759	3,660
Port Hacking	27	23.00	28	8.16	28	16.15	28	19.55	British	Commonwealth and Dom. Line	440.0	55.1	24.6	Hobart	London	Frozen, general	6,200	7,885	5,847
Lake Gormania	28	5 30	28	8.28	28	17.15	28	20.30	American	Hasler Brothers (S. B.)	250.5	43.8	21.0	Guayacan	Brunswick	Nitrates	3,150	2,539	1,657
Lake Gravity	28	7.30	28	9.54	28	18.25	29	3.32	American	Warren Transp. Co. (S. B.)	251.0	43.6	23.6	Antofagasta	Wilmington	Nitrates	3,562	2,773	1,770
Eastern Victor	28	7.00	28	10.24	28	19.30	.....	.....	American	Thorndyke Treholme (S. B.)	400.0	54.5	24.6	Vancouver	Sevastopol	R. R. equipment	6,350	6,158	4,413
Coalinga	28	9.40	28	15.07	28	21.55	28	23.30	American	Union Oil Co.	471.0	55.0	21.0	Antofagasta	Tampico	Ballast	.....	8,108	5,877
Ansaldo IV	28	12.20	29	6.40	29	14.15	30	5.27	Italian	National Navigation Society	377.0	51.0	22.0	Valparaiso	Genoa	General	6,300	5,473	3,600
Newport	28	2.49	29	6.49	29	14.31	.....	.....	American	Pacific Mail Steamship Co.	326.0	38.2	17.0	San Francisco	Cristobal	General	741	3,173	2,163
Santa Elisa	29	8.55	29	11.34	29	18.00	29	19.20	American	W. R. Grace & Co.	360.5	51.5	24.6	Valparaiso	New York	General	3,114	5,957	4,325
Singapore	29	17.59	30	6.45	30	15.20	30	18.40	British	Westminister Shipping Co.	364.0	50.0	23.0	Iquique	St. Nazaire	Nitrates	6,369	4,582	3,447
Apus	29	20.00	30	7.52	30	15.25	1	3.30	American	Green Star Line	401.4	53.2	26.6	Vancouver	London	Railroad ties	6,948	7,082	5,199
Ucayali	.....	.....	1	8.00	1	14.52	.....	.....	Peruvian	Peruvian Line	374.7	46.3	.....	Callao	Cristobal	General	.....	4,466	2,405
Muroran Maru	1	7.00	1	8.10	1	17.05	10	23.45	Japanese	Nippon Yusen Kaisha	400.0	54.5	22.0	Taku	New York	General	7,171	7,082	5,199
Achilles [7]	1	4.00	1	9.17	1	16.44	.....	.....	German	Reichs Fiscus	150.0	27.0	16.0	Arica	Cristobal [6]	Ballast	.....	475	149
Jamaica	1	12.00	1	13.39	1	21.20	.....	.....	British	Pacific Steam Navigation Co.	220.0	34.0	12.0	Tumaco	Cristobal	General	601	1,187	622
Parthia	26	20.00	2	6.42	2	15.25	.....	.....	Norwegian	Lare Christensen	172.0	31.0	15.0	Portland	Habana	Lumber	750	682	496

[7] Tug.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Sept. 26	Columbia	N. O. and S. A. Line	New Orleans and wayports.
Sept. 26	U. S. S. Redwing	United States Navy	New York.
Sept. 26	Calamares	United Fruit Co.	Port Limon, C. R.
Sept. 26	Cantigny [8]	United States Army	New York.
Sept. 27	Pastores	United Fruit Co.	New York via Habana.
Sept. 28	Haiti	French Line	Havre and wayports.
Sept. 28	Cartago	United Fruit Co.	New Orleans.
Sept. 28	Santa Leonora [8]	United States Army	New Orleans and wayports.
Sept. 29	Atenas	United Fruit Co.	New Orleans and wayports.
Sept. 29	Santa Marta	United Fruit Co.	New York via Kingston.
Sept. 29	U. S. S. Falcon	United States Navy	Norfolk.
Sept. 30	Colon	Panama Railroad Steamship Line	New York via Haiti.
Sept. 30	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Oct. 2	Oranian	Leyland Line	Liverpool via wayports.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Sept. 26	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Sept. 26	Calamares	United Fruit Co.	New York via Habana.
Sept. 26	Rail	United States Navy	Vera Cruz.
Sept. 26	Columbia	N. O. and S. A. Line	New Orleans and waypts.
Sept. 26	Lake Copley	United States Shipping Board	New York.
Sept. 27	Gen. G. W. Goethals	Panama Railroad Steamship Line	Puerto Colombia.
Sept. 27	F. D. Asche	Standard Oil Co.	Tampico.
Sept. 28	Pastores	United Fruit Co.	Port Limon.
Sept. 29	Atenas	United Fruit Co.	New Orleans.
Sept. 29	Cantigny [8]	United States Army	New York.
Sept. 29	U. S. S. Redwing	United States Navy	Guantanamo.
Sept. 30	Santa Marta	United Fruit Co.	New York via wayports.
Sept. 30	Cartago	United Fruit Co.	New Orleans and waypts.
Oct. 1	Panama	Panama Railroad Steamship Line	New York via Haiti.
Oct. 2	Haiti	French Line	Puerto Colombia.

[8] Transport.

PORT OF BALBOA.

Sept. 30	Wallingford	General Steamship Corp. (S. B.)	Antofagasta.
Sept. 30	Balcatta [9]	Pacific Mail Steamship Co.	Valparaiso.
Sept. 26	Annette Rolph	Rolph Mail Steamship Co.	San Francisco.
Oct. 2	Wallingford	General Steamship Corp. (S. B.)	San Francisco.

[9] Motor ship. * Other than ships passing through the Canal. Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending October 2, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Lake Copley	United States Shipping Board		September 26		15
Acajutla	Pacific Steam Navigation Co		September 26		755
Columbia	N. O. and S. A. Steamship Line	September 26	September 26	(2)	15
Calamares	United Fruit Co	September 26	September 26	65	80
Guatemala	Pacific Steam Navigation Co	September 26		1,728	
Manavi	Pacific Steam Navigation Co		September 27		638
Allianca	Panama Railroad Steamship Line		September 27		286
Gen. G. W. Goethals	Panama Railroad Steamship Line		September 27		1,025
[1] Cantigny	United States Government	September 26	September 29	154	13
Pastores	United Fruit Co	September 27	September 28	1,319	1½
Huasco	Chilean Steamship Co		September 28		706
Haiti	French Line	September 28		219	
Cartago	United Fruit Co	September 28	September 30	607	223
[1] Santa Leonora	United States Government	September 28		1,245	
Newport	Pacific Mail Steamship Line	September 29		741	
Santa Marta	United Fruit Co	September 29	September 30	5	51
Helder	Royal Netherlands Steamship Co	September 29	September 30	263	(3)
Colon	Panama Railroad Steamship Line	September 30		1,800	
Caribbean	Panama Railroad Cattle Industry	September 30		310	
Cauca	Pacific Steam Navigation Co		October 1		552
Panama	Panama Railroad Steamship Line		October 1		2,183
Ucayali	Peruvian Line	October 1		2,336	
Jamaica	Pacific Steam Navigation Co	October 1		602½	
Victoria	Pacific Steam Navigation Co	October 2		254	
Oranian	Leyland Line	October 2		1,115	

[1] U. S. Army transport. [2] No cargo discharged. [3] No cargo laded.

Naval Seaplane Flight to Kingston.

In addition to the aeroplane flight to Washington, D. C., mentioned on page 93 of this issue, 2 naval seaplanes, type *F–5–L, No. 4295*, with Lieutenant Wynne as pilot, and Ensign Lucas as assistant pilot, and *No. 4294* with Lieutenant Connell as pilot, and Ensign Dyer as assistant pilot, left at 7.20 this morning for Kingston, Jamaica. The 2 naval planes expect to return to the Isthmus Friday. Kingston is 551 nautical miles from Cristobal.

Dinner Dance at the Aspinwall.

A dinner dance will be given by the management of the Hotel Aspinwall, Taboga Island, on Saturday night, October 9. Coffee and cake and lemonade will be served to the dancers for 25 cents.

The tug *Coco Solo* will make an extra trip for the benefit of those who may desire to return home the same night, leaving Taboga at 11 p. m. Desirable rooms are, however, available for week-end visitors. The regular launch will leave Balboa at 5 p. m. on Saturday instead of 4.30, on account of the dance.

Seeking an Accessible Place with Cool Weather for Vacations.

In an effort to make it possible for the Canal employees and their families to secure a change of climate from the monotonous warmth of the Canal Zone at a minimum expense, the Governor has appointed a committee to investigate and report upon the possibility of establishing a camp or other form of recreational resort at some relatively accessible place of high altitude, presumably in Chiriqui Province of Panama or Costa Rica.

The committee consists of the Chief Health Officer, chairman; the Chief Quartermaster, the Marine Superintendent, and the Director of Physical Education and Play. They have been authorized to call on departments and divisions of the Canal organization for assistance in their investigations, and will welcome suggestions from individuals, either in or out of the organization.

The climate of the Canal Zone is enervating after prolonged residence, due to the humidity and lack of variation in temperature and an occasional change to cooler weather is advisable for the preservation of the health and energy of people whose normal habitat is in the temperate zone. The time and expense involved in voyages to the temperate zone have made it very difficult for many of the people connected with the Canal to secure the needed changes of climate, and the work of the committee will be an effort to conserve the health and efficiency of employees.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights (telephone 286):

Apprentice draftsman (male and female); $700 to $1,000 a year; form 304; age, 16 but not 21 years; three vacancies exist in the Hydrographic Office, Navy Department, Washington, D. C.; November 2, 1920.[1]

Assistant enameled metal technician (male and female); $1,000 to $1,500 a year; form 1312; age, 21 years and over; a vacancy exists in the Bureau of Standards, Department of Commerce, Washington, D. C.; October 26, 1920.[1]

Assistant oil chemist (male and female); $1,400 to $1,800 a year; form 1312; age, 20 but not 45 years; a vacancy exists in the Bureau of Commerce, Washington, D. C.; October 26, 1920.[1]

Chemist; $3,000 to $5,000 a year; associate chemist, $2,000 to $3,000 a year (male and female); form 2118; age, within reasonable limits; vacancies exist in the Chemical Warfare Service, Edgewood Arsenal, Edgewood, Md.; November 9, 1920.[1]

Coal mining engineer, $4,000 to $4,800 a year; associate coal mining engineer, $3,000 to $4,000 a year; assistant coal mining engineer, $2,000 to $3,000 a year; junior coal mining engineer, $1,500 to $2,000 a year (male and female); form 2118; age, under 45 years; vacancies exist in the Bureau of Mines, Department of the Interior, for service in the field; October 26, 1920.[1]

Domestic science teacher, Indian Service (male and female); $720 to $840 a year; form 1312; age, 22 but not 50 years; vacancies exist in the Indian Service; October 20, November 17, and December 15, 1920.[1]

Lay inspector (male and female); $1,080 a year and higher; form 304; age, 21 but not 45 years; vacancies exist in the Bureau of Animal Industry, Department of Agriculture; November 3, 1920.[1]

Reconstruction assistant (*a*) Physiotherapy; (*b*) occupational therapy (male and female); $600 to $900 a year with quarters, subsistence, and laundry; form 304, age, 21 years and over; vacancies exist in the Public Health Service throughout the United States; February 1, 1921.[1]

Veterinarian (male and female); $1,500 a year and higher; form 1312; age, 21 but not 45 years; vacancies exist in the Bureau of Animal Industry, Department of Agriculture; November 3, 1920.

[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

[2] Nonassembled. Applications will be received at any time until further notice.

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims againt these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Thomas Francis.....	52077	Antigua.....	Colon.....	Panama Railroad.....	Sept. 19, 1920.
Carlos Zapata.....	23234	Panama.....	Panama.....	Panama Railroad.....	Sept. 20, 1920.

Route Service Jitney—Cristobal-Mt. Hope.

The following is the schedule of the official jitney service between the Terminal building at Cristobal and Mount Hope. Cars stop at the office of the Commissary Division each way:

Leave Terminal Building.		Leave Mount Hope.	
A. M.	P. M.	A. M.	P. M.
8.00	12.30	8.15	12.45
8.30	1.00	8.45	1.15
9.00	1.30	9.15	1.45
9.30	2.00	9.45	2.15
10.00	2.30	10.15	2.45
10.30	3.00	10.45	3.15
	3.30		3.45

Official Circulars.

Authority to Sign Foremen's Orders.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 28, 1920.

CIRCULAR No. 261:

To all concerned—It has been called to my attention that the authority of certain employees to sign foremen's orders was not canceled until several months after they were separated from the service.

In the future the authority of an employee to sign foreman's orders will be canceled immediately when his duties no longer require him to draw property or material.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
CHESTER HARDING, *Governor.*

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 1, 1920.

CIRCULAR No. 262:

Effective October 1, 1920, Mr. Joel M. Pratt is designated an accountable official of The Panama Canal, *vice* Mr. John G. Claybourn, and as such will account for all nonexpendable property in use by the Dredging Division.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
CHESTER HARDING, *Governor.*

Assignment of Teachers.

THE PANAMA CANAL,
DIVISION OF SCHOOLS,
BALBOA HEIGHTS, C. Z., October 1, 1920.

To teachers of white schools—Teachers have been assigned to duty for the ensuing school year as follows (grades indicated are necessarily provisional):

Balboa high school—B. L. Boss, principal, science; Olga J. Frost, Spanish, French; Myrtis M. Gallup, English; Alberta R. Crespi, mathematics; Charmian E. Simpson, English, Latin; Hattie B. Paul, Spanish, history; Hazel C. Jarvis, science; Edna Baer, commercial; Wallace Lee, manual training and mechanical drawing; Loa Foster, household arts.

Balboa grade school—May L. Smith, principal; R. Cora Armistead, grade 8; Agnes R. O'Connor, grade 7; Mabel J. Barnhouse, grade 7; Estelle Feldman, grade 7; Isabel C. Sanger, grade 6; Claribel Peters, grade 6; Mary L. Adams, grade 5; Luella Mountain, grade 5; Belmina A. Gunhus, grade 5; Alma E. Smith, grade 4; Georgia M. Thomas, grade 4; Dove L. Prather, grade 4; Martha J. Hamilton, grade 3; Maude F. Patten, grade 3; Adah Prothero, grades 3 and 4; Mabel Wellings, grade 2; Edith W. Montgomery, grade 2; Bessie Donagho, grade 2; Marguerite Harshaw, grades 1 and 2; Francis M. Carlisle, grade 1; Katherine Doonan, grade 1; Nelle M. Shea, grade 1.

Pedro Miguel grade school—Emma M. Cobban, principal, grades 6 and 7; Agnes Humphreys, grades 4 and 5; (not yet reported), grades 2 and 3; Frances Bruner, grade 1.

Music—(Not yet reported), supervisor, Ancon.

Apprentice school—Frank H. Baker, instructor, Balboa.

Line teachers—Shirley C. Dorsey, grades 1 to 4; Ida O. Erickson, grades 5 to 8.

Physical education—Archibald J. Scott, Director (in organization of Bureau of Clubs and Playgrounds.)

Cristobal high and grade school—(Not yet reported), principal, mathematics; J. Isabella Dodds, history, Latin, etc.; Hattie L. Hornbeak, English, history; Ricardo Villafranca, Spanish; Helen C. Hickok, household arts; Henry C. Bacon, manual training and mechanical drawing; Beatrice Chapman, grade 8; Inez W. Reichel, grade 7; Hannah E. McClellan, grade 6; Teresa J. Donovan, grade 5; Grace E. Homes, grade 5; Ruth E. Jennison, grade 4; Beatrice Faulkner, grade 4; Florence Berthold, grade 3; Grace G. Shrader, grade 3; Elizabeth S. North, grades 2 and 3; Edith M. McCarthy, grade 2; Glow Williams, grade 2; Gladys Holbrook, grade 1; Bertha E. Jones, grade 1; M. St. Clair Nisbet, grade 1.

Ancon grade school—Grace E. McCray, principal, grade 1; Ruth Porter, grade 8; Alice M. Shea, grade 7; Susie P. Core, grade 6; Minnie O. Russell, grade 5; Muriel K. Neal, grade 5; Marion O. Wikoff, grade 4; Louise Powers, grade 3; Marie L. Mongin, grades 2 and 3; Besse Hartley, grade 2; S. Maye Henry, grade 1.

Gatun grade school—Ida B. Potts, principal, grades 7 and 8; Anna M. Weishaar, grades 5 and 6; Annie E. Stone, grades 3 and 4; (not yet reported), grades 2 and 3; Martha Donovan, grade 1.

Spanish in grades—Ricardo Villafranca, Atlantic side; Josefina Alderete, Pacific side.

Penmanship—Frances E. B. Smith, supervisor, Balboa.

Assistants to superintendent—F. X. Karrer, grades 6 to 12, and colored schools; Alice Alexander, grades 1 to 5.

Train attendants—Mrs. Eula J. Ewing, Balboa-Pedro Miguel; Mrs. C. K. Ferguson, Cristobal-Colon.

A. R. LANG,
Superintendent of Schools.

Approved:
C. A. MCILVAINE,
Executive Secretary.

Additions to Commissary Stock.

Boot and Shoe Section.

Shoes, growing girls' lace boots, patent leather, dull top, sizes 2½ to 6, pr.	$10.10
Shoes, men's Oxfords, canvas, white, "Keds," widths C and D, sizes 6 to 11, pr.	4.10
Shoes, men's, canvas, Bals, white, "Keds," widths C and D, sizes 6 to 11, pr.	4.10
Shoes, women's, patent leather pump, turn sole, Louis heel, pr.	11.05
Shoes, women's dull calf pump, turn sole, Louis heel, pr.	10.70
Shoes, women's, white Reignskin, turn sole, Louis heel, pr.	7.50
Lifts, shoe, Jap metal, ea.	.02
Hooks, button, ea.	.29

COMMISSARY NOTE.

Chinaware.

The following information has just been received from the manufacturers of a brand of American chinaware which explains the delay in filling commissary orders:

"We find that the extreme shortage of white ware has prevented us from putting these orders in work thus far, but we are doing the very best we can, and while it is impossible to give you any approximate shipping date at this writing, yet we are following up the matter as closely as possible and will forward the goods just as quickly as we have the white ware available for decorating."

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Volume XIV. Balboa Heights, C. Z., October 13, 1920. No. 9.

Diesel Oil for Sale at Atlantic Terminus.

One of the 55,000-barrel oil tanks previously used by The Panama Canal for the storage of crude fuel oil at the Atlantic terminus has been emptied of fuel oil and will be devoted to the storage of Diesel oil for sale to shipping. A supply of 50,000 barrels of Diesel oil will be available for sale there approximately October 15, at $4.50 per barrel. Sales will be made under the restrictions now in force on all sales of fuel to ships, which allow to each vessel only the quantity to enable her to reach the next bunkering station, without, however, diverting from regular routing; or in the case of ships bound for the west coast and returning, enough to make the voyage there and back to the Canal, when no bunkers are available at the west coast ports.

Heretofore the sale of Diesel oil at the Canal has been confined to Balboa, the Pacific terminus, except as occasionally a supply for a ship would be transported to Cristobal in tank cars.

Canal Traffic in September.

The Canal traffic for September, 1920, is shown as classified in the following tabulation. As stated in last week's issue, the traffic in September established new high records in aggregate net tonnage, Panama Canal measurement, of the commercial ships making the transit, and in tolls earned:

PACIFIC TO ATLANTIC.

No. ships.	Registry.	Registered gross tonnage.	Registered net tonnage.	Panama Canal net tonnage.	Tons cargo.	From—	To—
20	American...	77,705	48,163	57,890	90,219	W. coast S. America...	E. coast U. S.
3	British.....	17,202	10,637	12,983	10,254	W. coast S. America...	E. coast U. S.
2	Norwegian..	9,872	7,214	7,996	14,534	W. coast S. America...	E. coast U. S.
1	Danish.....	3,766	2,302	3,558	6,496	W. coast S. America...	E. coast U. S.
26	.....	108,545	68,316	82,427	121,503	W. coast S. America...	E. coast U. S.
8	British.....	9,969	5,325	6,949	2,592	W. coast S. America...	Cristobal.
3	American...	4,708	2,808	3,050	5,882	W. coast S. America...	Cristobal.
3	Chilean.....	10,165	6,160	8,827	1,134	W. coast S. America...	Cristobal.
1	German....	7,128	4,449	6,815	7,900	W. coast S. America...	Cristobal.
1	Peruvian...	4,744	2,073	2,951	3,233	W. coast S. America.....	Cristobal.
16	.....	36,714	20,815	28,592	20,741	W. coast S. America...	Cristobal.
8	British.....	52,092	32,607	41,929	41,252	W. coast S. America...	Europe.
2	Dutch.....	6,428	3,961	6,719	9,285	W. coast S. America...	Europe.
2	Italian.....	10,035	6,010	7,193	7,846	W. coast S. America...	Europe.
1	Danish.....	4,123	2,584	3,018	5,050	W. coast S. America...	Europe.
13	.....	72,678	45,162	58,859	63,433	W. coast S. America...	Europe.
10	American...	53,765	35,105	41,023	59,781	U. S. coastwise.	
1	.....	6,499	4,052	4,573	.....	U. S. coastwise.	
11	.....	60,264	39,157	45,596	59,781	U. S. coastwise.	
4	Japanese....	28,443	18,280	21,149	25,772	Far East.....	E. coast U. S.
3	American...	21,272	14,516	16,440	24,603	Far East.....	E. coast U. S.
1	British.....	8,611	5,370	6,725	9,300	Far East.....	E. coast U. S.
8	.....	58,326	38,166	44,314	59,675	Far East.....	E. coast U. S.

PACIFIC TO ATLANTIC—Continued.

No. ships.	Registry.	Registered gross tonnage.	Registered net tonnage.	Panama Canal net tonnage.	Tons cargo.	From—	To—
6	American...	35,089	23,395	29,444	38,863	W. coast U. S.....	Europe.
1	British.....	7,352	4,607	5,563	9,500	W. coast U. S.....	Europe.
1	Norwegian..	4,894	3,054	3,886	3,000	W. coast U. S.....	Europe.
8	.....	47,335	31,056	38,893	51,363	W. coast U. S.....	Europe.
6	British.....	47,829	31,778	41,555	41,327	Australia and N. Z'land.	Europe.
3	American...	19,228	12,013	14,605	.....	W. coast S. America...	Mexico.
2	British.....	10,678	6,744	7,659	.....	W. coast S. America...	Mexico.
1	Norwegian..	7,022	4,438	5,093	.....	W. coast S. America...	Mexico.
6	.....	36,928	23,195	27,357	.....	W. coast S. America...	Mexico.
4	British.....	38,574	25,413	28,355	19,991	Australia and N. Z'land	E. coast U. S.
1	American...	6,035	4,476	4,944	8,105	Australia and N. Z'land	E. coast U. S.
5	.....	44,609	29,889	33,299	28,096	Australia and N. Z'land	E. coast U. S.
2	American...	11,821	7,339	9,612	13,717	W. coast Canada.....	Europe.
2	British.....	9,474	6,127	7,603	13,165	W. coast Canada.....	Europe.
4	.....	21,295	13,466	17,215	26,882	W. coast Canada	Europe.
4	American...	10,336	6,445	7,817	2,046	W. coast U. S.....	Cristobal.
2	American...	14,330	9,720	11,127	20,004	Philippines.....	E. coast U. S.
1	British.....	4,439	2,740	4,367	6,533	Philippines.....	E. coast U. S.
3	.....	18,769	12,460	15,494	26,537	Philippines.....	E. coast U. S.
2	American...	14,331	8,845	10,654	.....	W. coast U. S.....	Mexico.
2	British.....	11,860	7,322	8,905	16,980	W. coast S. America...	Egypt.
2	American...	9,092	6,459	7,163	11,891	Hawaiian Islands.....	E. coast U. S.
1	British.....	5,265	3,223	4,082	6,323	W. coast U. S.....	South Africa.
1	American...	3,133	1,902	2,133	1,911	W. coast U. S.....	South Africa.
2	.....	8,398	5,125	6,215	8,234	W. coast U. S.....	South Africa.
1	Spanish.....	3,361	2,174	2,467	4,000	W. coast S. America...	West Indies.
1	British.....	444	8	115	.....	W. coast S. America...	West Indies.
2	.....	3,805	2,182	2,582	4,000	W. coast S. America...	West Indies.
2	Panamanian	362	362	362	362	Balboa.....	Cristobal.
1	American...	8,208	6,184	6,525	.....	Balboa.....	Mexico.
1	American...	7,225	4,464	5,324	5,567	W. coast Mexico.....	E. coast U. S.
1	Danish.....	6,637	4,236	5,318	8,200	Far East.....	Europe.
1	American...	5,687	3,450	5,448	6,000	W. coast Canada.....	E. coast U. S.
1	British.....	2,629	1,202	1,108	.....	W. coast Mexico.....	Trinidad.
1	American...	2,293	1,367	1,500	2,799	W. coast S. America...	Cuba.
1	American...	2,124	1,668	1,729	.....	Balboa.....	E. coast Cen. Am.
1	Costa Rican	158	93	185	285	W. coast Cen. America.	Cristobal.
130	.....	646,437	412,864	504,436	565,340		

In addition to the above vessels the British cruiser *Renown*, with a displacement tonnage of 31,559 made the transit northbound during the month.

ATLANTIC TO PACIFIC.

11	American...	45,869	28,007	36,156	31,446	E. coast U. S.....	W. coast S. America.
2	Danish.....	9,075	5,717	8,449	13,271	E. coast U. S.....	W. coast S. America.
1	Chilean.....	9,261	2,981	3,442	3,734	E. coast U. S.....	W. coast S. America.
1	British.....	8,489	5,134	6,089	2,713	E. coast U. S.....	W. coast S. America.
1	French.....	5,607	3,422	4,156	Ballast...	E. coast U. S.....	W. coast S. America.
1	Spanish.....	3,945	2,470	3,090	5,500	E. coast U. S.....	W. coast S. America.
1	Japanese....	3,857	2,364	3,033	4,740	E. coast U. S.....	W. coast S. America.
18	.....	86,103	50,095	64,415	61,404	E. coast U. S.....	W. coast S. America.

ATLANTIC TO PACIFIC—Continued.

No. ships.	Registry.	Registered gross tonnage.	Registered net tonnage.	Panama Canal net tonnage.	Tons cargo.	From—	To—
6	British.....	29,902	17,873	22,260	15,515	Europe.....	W. coast S. America.
5	Spanish.....	19,445	12,092	13,941	Ballast...	Europe.....	W coast S. America.
2	Norwegian..	11,387	7,216	8,976	700	Europe.....	W. coast S. America.
1	French.....	5,765	3,681	4,146	900	Europe.....	W. coast S. America.
1	Italian.. ..	5,371	2,933	3,530	900	Europe.....	W. coast S. America.
1	German....	4,630	2,861	3,640	Ballast...	Europe.....	W. coast S. America.
1	Dutch.....	3,623	2,229	3,807	3,050	Europe.....	W. coast S. America.
17	.....	80,123	48,885	60,300	21,065	Europe.....	W. coast S. America.
4	American...	25,605	16,530	21,754	33,656	E. coast U. S.....	Far East.
7	Japanese....	42,965	26,721	32,015	34,092	E. coast U. S.....	Far East.
3	British.....	21,480	14,092	15,532	24,573	E. coast U. S.....	Far East.
1	Chinese.....	6,026	3,871	4,432	4,500	E. coast U. S.....	Far East.
15	.....	96,076	61,214	73,733	96,821	E. coast U. S.....	Far East.
8	British.....	58,350	36,571	48,644	5,800	Europe.....	W. coast U. S.
2	American...	8,249	5,925	7,232	1,000	Europe.....	W. coast U. S.
1	Dutch.....	7,651	4,796	6,068	50	Europe.....	W. coast U. S.
1	Danish.....	6,919	5,223	5,658	600	Europe.....	W. coast U. S.
1	Norwegian..	4,747	2,963	3,374	Ballast...	Europe.....	W. coast U. S.
1	French.....	2,188	1,904	1,968	Ballast...	Europe.....	W. coast U. S.
14	.....	88,104	57,382	72,944	7,450	Europe.....	W. coast U. S.
7	British.....	8,854	4,938	6,525	5,427	Cristobal.....	W. coast S. America.
3	Chilean.....	10,165	6,160	8,827	1,773	Cristobal.....	W. coast S. America.
2	Peruvian...	8,049	4,187	5,356	2,991	Cristobal.....	W. coast S. America.
2	American...	1,230	744	700	360	Cristobal.....	W. coast S. America.
14	.....	28,298	16,029	21,408	10,551	Cristobal.....	W. coast S. America.
12	American...	56,573	36,207	44,651	50,450	U. S. coastwise.	
6	American...	39,502	25,398	30,935	42,081	Mexico.....	W. coast S. America.
2	Norwegian..	13,948	8,840	10,194	19,400	Mexico.....	W. coast S. America.
1	British.....	6,533	4,178	4,971	9,000	Mexico.....	W. coast S. America.
9	.....	59,983	38,416	46,100	70,481	Mexico.....	W. coast S. America.
5	British.....	45,674	30,206	37,671	35,768	Europe.....	Australia & N. Z'land
3	American...	16,472	9,305	10,569	12,025	E. coast U. S.....	Balboa, C. Z.
3	British.....	24,021	15,326	21,257	25,819	E. coast U. S.....	Australia & N. Z'land
3	American...	7,693	4,791	5,654	8,331	Cristobal.....	W. coast U. S.
1	Dutch.....	7,655	4,799	6,066	20	Europe.....	W. coast Canada.
1	British.....	5,704	3,531	4,999	Ballast...	Europe.....	W. coast Canada.
2	.....	13,359	8,330	11,065	20	Europe.....	W. coast Canada.
2	American...	7,972	5,078	6,518	10,933	E. coast U. S.....	W. coast Canada.
1	American...	8,597	5,277	6,254	10,000	Mexico.....	W. coast U. S.
1	American...	8,208	6,184	6,525	1,052	Mexico.....	Balboa, C. Z.
1	British.....	7,994	4,911	5,309	6,109	Canada.....	Australia & N. Z'land
1	American...	4,839	2,978	4,034	6,503	E. coast S. America....	W. coast U. S.
1	American...	4,375	2,727	3,812	6,568	E. coast U. S.....	Philippine Islands.
1	American...	2,286	1,393	1,927	2,867	Cuba.....	W. coast Canada.
1	Costa Rican	265	194	185	Ballast...	Cristobal.....	W. coast Cen. Am.
1	Panamanian	18	18	18	Ballast...	Cristobal.....	Balboa, C. Z.
125	.....	647,033	404,946	504,349	444,217		

Excursion to Pearl Islands.

The Supply Department announces its intention of conducting an excursion to the Pearl Islands, from Balboa, via Taboga, on Sunday, October 24, using the steamship *Favorite*. Tickets will be sold for $5 each, through the Canal restaurants. Details will be published later.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, October 9, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship	Arrived at port		Entered Canal		Completed transit		Cleared for sea		Nationality	Line	Length	Beam	Salt water draft	From—	For—	Cargo		Panama Canal tonnage	
	Day	Hour	Day	Hour	Day	Hour	Day	Hour								Nature	Tons	Gross	Net
Pionier	2	16.30	3	6.20	3	14.09	4	18.50	Belgian	Lloyd Royal Belge	400.0	52.2	24.1	Newport News	Valparaiso	Coal and general.	5,700	5,746	4,049
Consuelo	9–28	6.20	3	6.30	3	14.48	3	15.50	Spanish	Ricardo Ortiz	342.0	46.0	12.0	Tenerife	Caleta Buena	Ballast		3,879	2,868
Mina Brea	2	13.18	3	6.30	3	15.28	3	16.25	Canadian	International Petroleum Co	360.0	48.0	25.6	Tampico	Pisagua	Fuel oil	5,000	4,437	2,688
Winston Salem	2	21.34	3	6.32	3	16 31	3	17.40	American	Barber Steamship Co. (S. B.)	395.0	55.1	26.9	Newport News	Cavite, P. I.	Coal	8,082	7,316	5,241
Crisfield	2	16.30	3	6.40	3	16 05	3	16.57	American	American Metal Transp. (S. B.)	402.0	54.6	27.0	Norfolk	Iquique	Coal	8,538	6,932	5,100
Victoria	2	6.55	3	9.45	3	16.50	3	18.15	British	Pacific Steam Navigation Co	401.4	52.3	22.8	Liverpool	Valparaiso	General	2,800	6,887	4,575
Guatemala	9–26	18.45	3	11.15	3	18.24	3	19.50	British	Pacific Steam Navigation Co	359.3	43.1	18.6	Cristobal	Valparaiso	General	1,686	4,210	2,744
Jamaica	1	21.20	5	6.07	5	14 30	5	15.52	British	Pacific Steam Navigation Co	220.0	34.0	13.6	Cristobal	Tumaco	General	948	1,137	622
Newport	9–29	14.31	5	6.15	5	13.17	5	16.25	American	Pacific Mail Steamship Co	326.0	38.2	17.3	Cristobal	San Francisco	General	2,076	3,173	2,163
Gaelic Prince	4	20.17	5	6.37	5	14.25	5	15.15	British	Prince Line Limited	449.5	57 0	26.0	New York	Hongkong	General	9,000	6,459	6,658
Chincha	5	8.03	5	8.15	5	15.17	5	16.17	American	Green Star Line	403.0	52.3	22.0	Sabine	San Pedro	Sulphur	4,000	6,359	4,947
Point Bonita	5	15.20	6	6.24	6	12.55	6	17.35	American	Pacific Mail Steamship Co	289.0	44.0	19.1	Baltimore	San Francisco	General	2,737	2,895	1,993
Hayden	6	6.17	6	7.42	6	15.35			American	E. C. Evans & Sons (S. B.)	402.5	53.0	12.6	Lisbon	San Pedro	Ballast		6,064	4,762
Republic	6	2.20	6	9.22	6	18.04	6	19.25	American	Chile Steamship Co	345.1	49.1	22.6	Baltimore	Valparaiso	General	5,316	4,623	3,372
Apple Branch	6	9.05	6	12.05	6	18 48	6	20.07	British	Gulf Line, Limited	370.0	51.7	23.3	London	Coronel	General	5,175	5,112	3,511
Rosana	5	18.13	7	6.00	7	14.10	8	0.08	Costa Rican	Alberto Fait	112.0	25.0	7.0	Cristobal	Buenaventura	Ballast		256	185
Eurana	9–30	4.00	7	6.10	7	14.26	7	16.44	American	Green Star Line	399.7	56.2	26.6	Baltimore	Yokohama	Steel	8,000	7,338	5,555
Ucayali	1	14.52	7	6.15	7	13.07	7	15.25	Peruvian	Peruvian Line	374.0	46.0	19.9	Cristobal	Callao	General	1,643	4,466	2,405
Woodarra	6	20.12	7	6.16	7	14.25	7	15.25	British	British India Steam Nav. Co	449.0	58.0	27.1	London	Dunedin	General	7,577	8,238	5,313
La Habra	6	23.10	7	6.48	7	15.26	7	17.40	Norwegian	W. Wilhelmsen	424.8	57.0	26.0	Tampico	Iquique	Fuel oil	9,200	7,053	5,085
Nokatay	9–24	7.49	7	10.03	7	19.58			American	U. S. & Australasia Line (S. B.)	402.6	53.0	23.0	New York	Melbourne	General, case oil.	7,000	6,580	4,927
Ebro	6	6.58	7	13.15	7	20.42	7	22.43	British	Pacific Steam Navigation Co	450.0	58.0	24.0	New York	Valparaiso	General	4,077	9,089	6,215
Hoyeisan Maru	7	15.46	8	6.20	8	13.50	8	14.58	Japanese	Mitsui & Co	407.3	51.0	26.11	Newport News	Antofagasta	Coal	7,018	6,189	4,440
West Islip	8	3.20	8	6.53	8	14.24	9	21.53	American	Struthers & Dixon (S. B.)	409.8	54.2	20.0	Boston	Tacoma	General	1,167	6,755	4,899
Laura C. Hall [1]	4	19.50	8	7.05	8	15.06	9	10.59	British	Pacific Metals Corporation	81.0	25.6	8.0	Cristobal	Buenaventura	General	24	130	69
Eastern Cloud	8	6.45	8	7.20	8	15.19	9	12.45	American	Barber Steamship Co. (S. B.)	385.0	51.2	28.0	Philadelphia	Shanghai	General, steel	7,718	6,242	4,471
West Jappa	8	19.26	9	8.08	9	15.45	9	16.31	American	Frank Waterhouse & Co. (S. B.)	410.5	54.2	19.6	New York	Shanghai	General	2,500	6,755	4,873
Aspinet	9	1.20	9	9.55	9	17.55	9	18.45	British	Standard Transportation Co	389.5	52.1	25.0	Philadelphia	Darien	Oil	6,800	5,287	3,837
S. C. No. 284			8	9.28	8	14.58			American	United States Navy									

[1] Power schooner.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship	Arrived at port		Entered Canal		Completed transit		Cleared for sea		Nationality	Line	Length	Beam	Salt water draft	From—	For—	Cargo		Panama Canal tonnage	
	Day	Hour	Day	Hour	Day	Hour	Day	Hour								Nature	Tons	Gross	Net
Niceto de Larrinaga	2	15.30	3	6.32	3	14.33	3	14.33	British	Miguel de Larrinaga Co	439.8	56.0	25.6	Portland	Barry	Wheat	8,769	7,188	5,563
Trecarrell	3	5.00	3	8.02	3	15.50	3	17.40	British	Hain Steamship Co	400.5	52.3	23.6	Tocopilla	Alexandria	Nitrates	7,622	5,790	4,067
Tregantle	3	6.00	3	8.29	3	17.00	3	19.45	British	E. Hain & Co	400.2	52.1	23.6	Valparaiso	Azores [4]	Nitrates	6,621	6,035	4,610
Sciota [2]	9–23	16.44	3	10.39	3	16.32			American	United States Navy	155.0	30.0		Balboa	Cristobal				
S. C. No. 284	9–15	16.10	3	13.50	3	18.40			American	United States Navy				Balboa	Cristobal				
Laura C. Hall [1]	4	3.00	4	11.10	4	19.30	8	7.05	British	Pacific Metals Corporation	81.0	25.6	10.0	Buenaventura	Cristobal	Coffee	51	130	69
Pacific [3]	3	20.00	4	12.07	4	19.35	5	6.40	Swedish	Johnson Line	360.0	51.6	24.0	San Francisco	Christiania	Coal and general	5,550	5,360	4,089

[2] Tug. [3] Motor schooner. [4] For orders.

Salvador	4	12.10	4	13.58	4	20.38	11	6.15	British	Pacific Steam Navigation Co.	215.0	36.5	14.3	Champerico	Cristobal	General	538	1,213	692
Lock City [5]	4	8.00	4	11.18					American	W. C. Hyler	30.2	8.4		Taboga Island	Gatun Lake			7	7
Maricopa	9–25	1.00	5	6.42	5	14.08	5	14.08	Norwegian	W. Wilhelmsen	425.5	57.0	16.0	Tocopilla	Tampico	Ballast		6,996	5,108
Westboro	9–23	20.40	5	6.55	5	15.10	6	5.15	American	Sudden & Christenson (S. B.)	409.5	54.2	23.1	Portland	Belfast	Sacked wheat	7,013¾	6,617	4,810
Frederick Luckenbach	4	17.50	5	6.58	5	15.50	5	16.25	American	Luckenbach Steamship Co.	317.5	40.2	22.0	San Francisco	New York	General	3,000	2,986	2,091
Otarama	5	7.30	5	9.26	5	16.55	5	17.52	British	New Zealand Shipping Co.	454.0	56.0	23.0	New Plymouth	London	Frozen, general	3,400	7,981	5,597
Rosana [5]	5	2.00	5	10.52	5	18.13	7	6.00	Costa Rican	Alberto Fait	107.7	25.0	8.0	Puntarenas	Cristobal	Lumber, etc.	(10)	256	185
Poplar Branch	6	1.00	6	8.03	6	15.55	6	17.45	British	Nautilus Steam Shipping Co.	396.2	56.2	24.0	Puntarenas	Liverpool	Nitrates, general	7,392	6,640	5,107
St. Athan [7]	6	3.00	6	8.18	6	14.38			British	British Government	135.0	29.1	12.0	Arica	United King.	Ballast		443	108
Santa Olivia	6	7.45	6	8.37	6	17.15	6	23.55	American	Atlantic & Pacific Steamship Co.	404.6	53.7	28.6	Valparaiso	New York	(?)	8,750	6,736	4,883
Essequibo	6	11.00	6	12.34	6	18.50	8	12.25	British	Royal Mail Steam Packet Co.	449.4	57.8	23.0	Valparaiso	New York	General	1,376	9,037	6,089
Achilles [6]	9–21	13.49	7	7.48	7	14.17	7	14.17	American	Panama Railroad Steamship Line	536.0	65.0		Balboa	Norfolk	Ballast		11,519	7,008
Lake Fansdale	6	19.10	7	8.15	7	16.50	9	10.22	American	Gallahan Atkinson Co. (S. B.)	251.0	43.6	23.0	Taltal	New York	Nitrates	3,560	2,856	1,806
Galdamas	7	3.30	7	8.36	7	17.30	10	13.14	Spanish	Cia. Auxiliar Maritime	331.9	46.1	20.7	Iquique	Cristobal [4]	Nitrates	4,114	3,686	2,632
Lompoc	5	21.00	7	13.26	7	20.55	7	20.55	British	C. T. Bowring & Co.	435.3	55.8	18.0	Valparaiso	Tampico	Ballast		7,488	5,342
Balboa	7	16.30	8	6.38	8	14.20			American	Colombian Maritime Co.	190.0	29.1	14.6	Buenaventura	Cristobal	(8)	613	741	350
Negada	6	2.30	8	9.26	8	20.12			German	Cosmos Line	410.9	50.7	21.0	Valparaiso	Cristobal [4]	Nitrates	5,000		
Saint Louis	8	7.25	8	8.40	8	16.30	9	15.20	French	French Transatlantic Line	398.1	53.3	22.0	Talcahuano	Bordeaux	(9)	6,201	5,857	4,166
Saint Teath [2]	8	13.05	9	6.43	9	13.17			British	British Government	134.0	29.0	13.6	Arica	United King.	Ballast		450	105
Crown of Galicia	8	16.35	9	6.53	9	14.10	9	16.08	British	T. & J. Harrison Line	400.5	52.0	26.0	Vancouver	London	General	6,000	5,714	4,125
Daybreak	9	6.15	9	8.20	9	16.00	9	19.20	British	Claymore Shipping Co, Ltd.	331.3	46.9	22.6	Iquique	Norfolk	Nitrates	4,712	3,688	2,437
Orbita	9	8.00	9	9.26	9	17.30	9	21.40	British	Pacific Steam Navigation Co.	550.3	67.3	29.0	Coronel	Liverpool	General	5,800	16,822	11,508
Berengar	8	13.05	9	11.50	10	12.20			German	Roland Line	399.2	53.7	23.0	Arica	United King.	Nitrates	6,000		
Brookline	9	14.20	9	15.16	10	1.65	10	9.42	American	E. C. Evans & Sons (S. B.)	410.5	54.2	24.0	San Francisco	Hull	Barley	7,503		

[5] Launch. [6] Collier. [7] Nitrate of soda and general. [8] Coffee, hats, and hides. [9] Nitrates, copper, borax, and hides. [10] 152,400 kilos.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Oct. 2	Lake Hector	United States Shipping Board	Cartagena.
Oct. 3	Geo. W. Barnes	Pan-American Pet. and Transp. Co	Tampico.
Oct. 3	Pastores	United Fruit Co.	Port Limon.
Oct. 3	Astmahco III	Astoria Mahogany Co.	Bluefields.
Oct. 4	Van Rensellaer	Royal Netherlands W. I. Mail Co.	Amsterdam.
Oct. 5	Heredia	United Fruit Co.	New Orleans.
Oct. 5	Ulua	United Fruit Co.	New York via Habana.
Oct. 6	Metapan	United Fruit Co.	New Orleans via wayports
Oct. 7	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Oct. 9	Cristobal	Panama Railroad Steamship Line	New York.
Oct. 9	Gen. G. W. Goethals	Panama Railroad Steamship Line	Puerto Colombia.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Oct. 3	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Oct. 3	St. Claude [2]	British Government	Kingston.
Oct. 3	St. Ewe [2]	British Government	Kingston.
Oct. 3	Pastores	United Fruit Co.	New York via Habana.
Oct. 4	Colon	Panama Railroad Steamship Line	Puerto Colombia.
Oct. 4	Santa Leonora [11]	United States Army	New York via San Juan.
Oct. 4	Lake Hector	United States Shipping Board	New Orleans.
Oct. 5	Geo. W. Barnes	Pan-American Pet. and Transp. Co.	Tampico.
Oct. 5	Oranian	Leyland Line	Mobile.
Oct. 5	Van Rensellaer	Royal Netherlands W. I. Mail Co.	Cartagena.
Oct. 6	Metapan	United Fruit Co.	New Orleans.
Oct. 6	Ulua	United Fruit Co.	Port Limon.
Oct. 7	Heredia	United Fruit Co.	N. O. via Bocas & Habana.
Oct. 7	Bonham	United States Shipping Board	Cumana, Venezuela.
Oct. 8	U. S. S. Falcon	United States Navy	High seas.

[11] Transport.

PORT OF BALBOA.

None				Oct. 3	Balcatta	Pacific Motor Ship Co.	Vancouver.
				Oct. 3	U. S. S. Cleveland	United States Navy	Guayaquil.

*Other than ships passing through the Canal.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmerid an.

Amendment to Tariff No. 4.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
BALBOA HEIGHTS, C. Z., October 6, 1920.

To all concerned—The following amendment is made to Panama Canal Tariff No. 4—Schedule of Rates for Supplies and Services Furnished to Shipping and Allied Interests at the Panama Canal, effective October 8, 1920:

ITEM 4—HANDLING LINES.
Effective October 8, 1920.

1. For each man furnished by The Panama Canal on board vessels for a complete trip through the Canal, for the purpose of handling lines and locomotive wires on board such vessels, to promote their safety while being passed through the locks $4.00

The foregoing will be included in Supplement No. 3 to Tariff No. 4, when this supplement is issued.

CHESTER HARDING,
Governor, The Panama Canal.
President, Panama Railroad Company.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended October 8:

Submarines *R-21* and *R-27*, periodical overhaul; steamship *Marne*, general repairs; dredge *No. 83*, general repairs; launch *Captain Wilhelm*, hull repairs and installation of new engine; motor ship *Maricopa*, engine repairs; steamships *Westboro*, engine repairs; *Achilles*, engine and hull repairs and repairs to bow where damaged while traversing Cut; motor ship *Balcatta*, minor light engine repairs; barges *Nos. 121* and *102*, for conversion into garbage scows; steamships *Nokatay*, installation of main feed pump; *Hayden*, repairs to main turbine and feed pump and miscellaneous engineer's department work; *Hodges*, general repairs; barge *No. 131*, general repairs.

The following vessels were at the Cristobal shops for repairs during the week ended October 11:

Steamships *General G. W. Goethals*, *Cristobal*, *Advance*, miscellaneous repairs and painting to engine, deck, and steward departments; U. S. S. Eagle *No. 47*, repair reduction gear and rebush planitary intermediate gears; steamships *Poe*, scrape and paint, repair rudder, stern bushing, etc.; *Balboa*, renew boiler tubes, repair winch brakes, injector, etc.; *Europa*, repair boiler and piping; *St. Joseph*, repair main engines and pumps; *Astmahco 111*, repair main engine, ice machine, generator, engine, pumps, donkey boiler, etc.; U. S. S. *C-285*, overhaul main and auxiliary engines; U. S. S. *R-25*, repair and alter engine foundations; launch *Pequeni*, overhaul both engines; schooner *Arabia*, tug *Engineer*, steamship *Peru*, U. S. S. Eagle *No. 33*, steamship *Point Bonita*, U. S. S. Eagle *No. 7*, steamship *Westboro*, U. S. S. Eagle *No. 34*, steamship *Heredia*, motor schooner *Laura C. Hall*, tugs *St. Athan*, *St. Teath*, U. S. S. Eagle *No. 6*, steamship *Caribbean*, U. S. S. Eagle *No. 12*, steamship *Daybreak*, U. S. M. P. *Graham*, steamships *Lake Granby*, *Brookline*, *Haynie*, minor repairs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending October 9, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Laura C. Hall	Pacific Metals Corporation Ltd.	October 4	October 4	12	.....
Salvador	Pacific Steam Navigation Co.	October 4	October 4	9	.....
Rosana	Alberto Fait	October 5	October 5	6	.....
Newport	Pacific Mail Steamship Co.	October 5	October 5	.....	4
Point Bonita	Pacific Mail Steamship Co.	October 6	October 6	47	.....
Rosana	Alberto Fait	October 7	October 7	.....	49
Balboa	Colombian Maritime Co.	October 7	October 8	1	.....
Laura C. Hall	Pacific Metals Corporation, Ltd.	October 8	October 8	.....	27
Peru	Pacific Steam Navigation Co	October 9	.....	21	.....

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending October 9, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Guatemala	Pacific Steam Navigation Co	.....	October 3	.....	1,775
Haiti	French Line	.....	October 3	.....	507
Caribbean	Panama Railroad Cattle Industry	.....	October 3	.....	3/18
Pastores	United Fruit Co	October 3	October 3	100	3
Colon	Panama Railroad Steamship Line	.....	October 4	.....	135
[1] Santa Leonora	United States Government	.....	October 4	.....	12
Jamaica	Pacific Steam Navigation Co	.....	October 5	.....	964
Newport	Pacific Mail Steamship Line	.....	October 5	.....	2,075
Oranian	Leyland Line	.....	October 5	.....	416
Geo. W. Barnes	Pan.-Amer. Pet. and Transp. Co	October 3	October 5	1,386	(3)
Van Rensellaer	Royal Netherlands Steamship Line	October 4	October 5	15	420
Pacific	Johnson Steamship Line	October 4	October 5	(2)	76
Laura C. Hall	Pacific Metals Corporation	October 4	October 8	51	24
Salvador	Pacific Steam Navigation Co	October 4	.....	538	.....
Point Bonita	Pacific Mail Steamship Line	October 5	October 6	216	(3)
Ulua	United Fruit Co	October 5	October 6	850	1
Rosana	Alberto Fait	October 5	October 7	165½	(3)
Heredia	United Fruit Co	October 5	October 7	716	311
Ebro	Pacific Steam Navigation Co	October 6	October 7	307	(3)
Ucavali	Peruvian Line	.....	October 7	.....	1,645
Caribbean	Panama Railroad Cattle Industry	October 7	.....	310	.....
Gen. G. W. Goethals	Panama Railroad Steamship Line	October 9	.....	2	.....
Cristobal	Panama Railroad Steamship Line	October 9	.....	5,045	.....
Balboa	Colombian Maritime Co	October 8	.....	613	.....

[1] U. S. Army transport. [2] No cargo discharged. [3] No cargo laded.

Weather Conditions in September, 1920.

The rainfall for the month was above normal over the Pacific slope and along the continental divide and below normal over the Atlantic slope. The rainfall at Pedro Miguel, Rio Grande, Culebra, Camacho, and Empire was the highest on record at these stations for the month of September, while at Trinidad and Brazos Brook it was the lowest. At Colon the September rainfall was the lowest since 1905. Totals ranged from 5.35 inches at the Cucherbo station in the Trinidad valley to 18.93 inches at Empire. The greatest amount of rainfall recorded on any one day was 4.93 inches, at Balboa on the 21st.

The estimated rainfall over the Gatun Lake watershed was 9.43 inches, compared with a 10-year mean of 11.63 inches. Over the Chagres River watershed above Alhajuela it was 11.18 inches, compared with a 19-year mean of 12.50 inches.

The air temperature, atmospheric pressure, daytime cloudiness, and wind movement were near the normal. The relative humidity and surface temperature of the sea were approximately normal on the Pacific Coast and slightly below normal on the Atlantic. The evaporation was above normal everywhere except over Gatun Lake surface, where it was slightly below the average.

The usual number of fogs were observed at interior stations, all of which lifted or were dissipated by 8.30 a. m.

Seismic tremors were recorded on the 3d, 20th, and 24th.

Gatun Lake hydrology—Mean elevation of Gatun Lake was 85.60 feet; maximum, 86 feet, on the 30th; minimum, 85.48 feet, on the 15th. Evaporation from Gatun Lake surface was 4.142 inches; rainfall on Gatun Lake drainage basin, 9.43 inches; total yield of Gatun Lake watershed, 5.61 inches on the watershed. The total yield amounted to 59 per cent of the rainfall.

Climatological conditions at the representative stations are summarized in the following table:

Stations.	Pressure (reduced to mean of 24 hours).	Temperature. Mean.	Temperature. Maximum.	Temperature. Date.	Temperature. Minimum.	Temperature. Date.	Mean relative humidity.	Precipitation. Total inches.	Precipitation. Station average.	Precipitation. Days with .01 inch or more.	Wind. Total movement (miles.)	Wind. Prevailing direction.	Wind. Maximum velocity in miles.	Wind. Direction.	Wind. Date.
Balboa Heights	29.840	80.0	90	Sept. 15	72	Sept. 9	86.8	9.14	7.94	22	4,464	N.W.	30	S.	Sept. 8
Colon	29.840	81.4	92	Sept. 18	74	Sept. 6	83.3	6.81	12.54	19	4,672	W.	23	W.	Sept. 2
Gamboa	.....	79.7	89	[1]Sep. 17	71	[1]Sept. 6	....	12.68	10.44	24	3,078	N.E.	24	N.E.	Sept. 5
Gatun	.....	80.6	90	Sept. 19	72	Sept. 6	....	6.62	9.84	22	4,114	N.W.	29	S.	Sept. 8

[1] And other dates.

Prices of Miscellaneous Supplies.

The following are prices to individuals and companies, including the 25 per cent surcharge, effective October 1, 1920:

Commodities.	Unit.	Price.
Brass, bar	Lb.	$0.46
Brass, sheet	Lb.	.75
Bronze, Tobin	Lb.	.375
Cement, at Panama:		
Including bag and surcharge	Bag	2.07
Credit for empty bags returned	Bag	.25
Cement, at Colon:		
Including bag and surcharge	Bag	1.91
Credit for empty bags returned	Bag	.25
Charcoal	Cwt.	1.25
Copper bar	Lb.	.46
Gasoline, in drums (motor grade)	Gal.	.56
Lead, sheet	Lb.	.17
Lead, pig	Lb.	.125
Lumber, ceiling, siding, and flooring, 1" x 6"	M ft. B. M.	118.75
Lumber, flooring, 1" x 3" and 1" x 4"	M ft. B. M.	143.75
Lumber, yellow pine or fir, except ceiling	M ft. B. M.	80.00
Metal, yellow	Lb.	.375
Nuts, iron, machine, hexagon	Lb.	.25
Nuts, iron, machine, square	Lb.	.225
Nails, common wire	Lb.	.075
Nails, galvanized	Lb.	.125
Oakum, navy, spun	Lb.	.20
Oakum, navy, unspun	Lb.	.175
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl of 42 gals	3.50
Oil, fuel, at Balboa and Cristobal, in drums or barrels, no surcharge	Bbl of 42 gals	3.75
Oils, greases, and lubricants:		
Oil, air, compressor cylinder	Gal.	.575
Oil, ammonia cylinder	Gal.	.685
Oil, burning	Gal.	1.56
Oil, cylinder, dark, marine	Gal.	1.125
Oil, cylinder, dark, marine	Gal.	1.25
Oil, ice, machine, steam	Gal.	1.00
Oil, engine, dynamo	Gal.	.79
Oil, engine, in tins	Gal.	.69
Oil, engine, in barrels	Gal.	.44
Oil, gas engine, heavy, in barrels	Gal.	.69
Oil, gas engine, heavy, in cases	Gal.	.975
Oil, gas engine, in drums, medium	Gal.	.60
Oil, kerosene, in drums	Gal.	.375
Oil, kerosene, in tins (cases)	Gal.	.45
Oil, linseed, boiled	Gal.	2.50
Oil, linseed, raw	Gal.	2.60
Oil, locomotive engine	Gal.	.59
Oil, lard	Gal.	2.07
Oil, marine engine	Gal.	1.06
Oil, marine engine	Gal.	.625
Oil, marine engine	Gal.	.44
Oil, marine engine	Gal.	.75
Oil, marine engine	Gal.	1.02
Oil, mineral seal	Gal.	.375
Oil, nonliquid	Lb.	.09
Oil, stationary engine	Gal.	.49
Oil, sperm	Gal.	2.875
Oil, signal	Gal.	1.375
Oil, valve	Gal.	.975
Oil, car	Gal.	.34
Grease, black gear	Lb.	.115
Grease, yellow, cup, No. 3	Lb.	.14
Grease, yellow, cup, No. 5	Lb.	.17
Grease, rod, special	Lb.	.25
Grease, tunnel bearing	Lb.	.215
Tallow	Lb.	.225
Turpentine	Gal.	2.69
Turpentine substitute	Gal.	.69
Vaseline	Lb.	.11
Paint, lead, white, dry	Lb.	.15
Paint, lead, white, in oil	Lb.	.175
Paint, white, zinc, dry	Lb.	.225
Paint, white, zinc, in oil	Lb.	.21
Paint, zinc, 35 per cent in oil	Lb.	.19
Rivets	Lb.	.10
Rope, Manila, ¼" diameter	C. ft.	.69
Rope, Manila, ⅜" diameter	C. ft.	1.50
Rope, Manila, ½" diameter	C. ft.	2.50
Rope, Manila, ⅝" diameter	C. ft.	4.06
Rope, Manila, ¾" diameter	C. ft.	4.88
Rope, Manila, ⅞" diameter	C. ft.	7.00
Rope, Manila, 1" diameter	C. ft.	8.75
Rope, Manila, 1¼" diameter	C. ft.	12.50
Rope, Manila, 1½" diameter	C. ft.	19.69

Commodities.	Unit.	Price.
Rope, Manila, 1¾" diameter	C. ft.	$26.81
Rope, Manila, 2" diameter	C. ft.	31.44
Rope, Manila, 2½" diameter	C. ft.	46.88
Rope, Manila, 3" diameter	C. ft.	76.25
Rope, Manila, 3½" diameter	C. ft.	91.25
Rope, Manila, 4" diameter	C. ft.	111.44
Soap, laundry	Lb.	.175
Soda, ash	Lb.	.05
Steel, bar	Lb.	.06
Steel, spring	Lb.	.21
Steel, cold, round (rolled)	Lb.	.20
Steel, sheet	Lb.	.06
Steel, structural (angles, beams, etc.)	Lb,	.06
Tin, block	Lb.	.79
Tin, banca	Lb.	.665
Tin, sheet	Lb.	.19
Washers, cut	Lb.	.15
Waste, colored	Lb.	.26
Waste, white	Lb.	.26
Zinc, boiler plate, ⅝" x 6" x 12"	Lb.	.17

Result of Aeroplane Flights.

All 3 of the aeroplanes that started from Cristobal in the morning of October 6 to fly to Kingston, one with the intention of continuing to Washington, were forced by a severe storm over the Caribbean south of Jamaica to return to the Isthmus. The 2 naval planes, equipped with radio, were warned of the storm from Cristobal and returned after getting out about 200 miles. The Army plane, piloted by Lieutenant Austin, with Washington as his final destination, was not equipped with radio and ran into the storm when about 400 miles out. The pilot attempted to drive through it, but trouble with his propeller compelled him to give it up, and he struck back for Cristobal, arriving there at approximately 4.20 p. m. He had been flying continuously for 10 hours and 25 minutes, and had traveled about 900 miles.

While the flights were unsuccessful in reaching the goal, they are considered successful in experiment. For several months the Naval Air Station has been securing and recording data on air currents and storms over this section, and the observations made are of value not only to aviation but to shipping.

Weather conditions at this season are not the most favorable for the flight to Kingston, and the effort to fly to the United States will be deferred; the naval aviators, however, expect shortly to make another attempt to reach Kingston.

Extra Launch Saturday Nights to the Aspinwall.

Beginning Saturday, October 16, the present launch schedule between Balboa and the Hotel Aspinwall, Taboga, will be supplemented by a trip leaving Dock 19, Balboa, at 7 p. m., on Saturdays, in addition to the usual launch leaving at 4.30 p. m. The late launch will be put on to accommodate people living on the Atlantic side and along the line of the Panama Railroad, who will thus be able to put in a full day's work and catch train No. 7, leaving Colon at 5 p. m. and arriving at Balboa at 6.40 p. m., in time for the launch. Late dinner will be served at the Aspinwall for the patrons of the late launch.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;' in the United States, "Pancanal, Washington."

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal Zone post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights (telephone 286):

Computer, Bureau of Mines (male and female); $1,500 a year; form 1312; age, under 40 years; a vacancy exists in the Bureau of Mines, Pittsburgh, Pa.; November 3, 1920.

Dairy husbandman (male and female); $2,000 to $3,000 a year; form 2118; age, 21 but not 50 years; vacancies exist in the Dairy Division, Bureau of Animal Industry, Department of Agriculture, for duty in Washington, D. C., and in the field, November 2, 1920.[1]

Highway bridge engineer, $2,400 to $3,000 a year; junior highway bridge engineer; $1,500 to $2,220 a year (male and female); form 1312; age, highway bridge engineer, under 35 years; junior highway bridge engineer, under 30 years; vacancies exist in the Bureau of Public Roads, Department of Agriculture, for duties in the field, October 26, 1920.[1]

Translator, qualified as assistant tariff expert (male and female); $2,000 a year and over; form 1312; age, within reasonable limits; vacancies exist in the Bureau of Foreign and Domestic Commerce, Department of Commerce, Washington, D. C.

[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Official Circulars.

Reimbursement for Meals.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 30, 1920.

CIRCULAR No. 658-7:

Paragraph 8 of Circular No. 658-4, dated November 24, 1916, is amended to read as follows, effective October 1, 1920:

8. Reimbursement for meals taken at a Panama Canal restaurant having *a la carte* service only is limited to 50 cents per meal, or a total of $1.50 per day. At hotels where regular meals are served, reimbursement is limited to the price of such meals.

This supersedes Circular No. 658-5, dated August 29, 1919.

CHESTER HARDING,
Governor.

Shipments of Surveyed Property.

THE PANAMA CANAL,
EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 21, 1920.

CIRCULAR No. 263:

To all concerned—In order that shipments of surveyed property may not become mixed with other property and in order that the consignee may know what disposition to make of it when received, special tags have been printed to be used when making such shipments which, in accordance with the Auditor's circular No. 239, must be tagged.

Form 3992 (black) must be attached to all shipments of property surveyed as scrap. Form 3993 (red) must be attached to shipments of all surveyed property returned to stock or forwarded to the obsolete store for sale. Shipments should be consolidated into as few separate parcels as practicable, and each separate parcel must be tagged. All blank spaces on the tags must be filled out in full.

Storekeepers and others are requested to furnish this office with lists of all shipments received which have not been tagged in accordance with circular 239 and the foregoing instructions.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
CHESTER HARDING,
Governor.

Supplement No. 3 to List of Nonexpendable Property.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 7, 1920.

CIRCULAR No. 265:

To all concerned—Supplement No. 3 to the List of Nonexpendable Property is now ready for mailing. Distribution will be made by the Property and Requisition Bureau direct to the responsible officials whose property accounts are handled by that bureau. The Dredging Division, Mechanical Division, and district quartermasters are being supplied from this office. Additional copies should be ordered by telephone through the Property and Requisition Bureau, Balboa No. 171, or through this office, Balboa No. 11.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
CHESTER HARDING,
Governor.

Employees Suffering from Malaria.

THE PANAMA CANAL,
HEALTH DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 4, 1920.

CIRCULAR No. 184:

To all concerned—1. Patients suffering from malaria often retain the germ of the disease in their blood after all the symptoms have disappeared, so that they are apparently well. Such cases are a danger to the community, in that they infect mosquitoes and through them other people. Besides this, such cases are not permanently cured and will relapse whenever their resisting power is lowered from any depressing cause.

2. As patients naturally do not desire to remain in hospital after they feel well enough to work, it is necessary that they should continue under treatment in quarters until they are permanently cured. It is, therefore, directed that employees suffering from malaria shall, when discharged from the hospital, report to their district physician for treatment once a week, and shall continue to report for treatment for at least 2 months and until pronounced cured.

3. Heads of departments and divisions, hospital and district physicians, foremen, and others concerned, are directed to do all in their power to assist in enforcing this order.

H. C. FISHER,
Chief Health Officer.

Approved:
CHESTER HARDING,
Governor.

Collections on Pay Roll for Lost Property.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 6, 1920.

CIRCULAR NO. 264:

"Form 5221—Certificate of charges on pay roll covering property lost, destroyed, or damaged through neglect or carelessness of responsible party."

Credits covering collections made on pay rolls for lost property will in the future be passed to divisions concerned through their stores account instead of their unclassified expense account.

The original and two copies of form 5221 will be required in this office and form should be prepared in sufficient number of copies to enable all concerned to comply with this request.

H. A. A. SMITH,
Auditor, The Panama Canal.

Additional Visiting Hour for Section "A," Ancon Hospital.

THE PANAMA CANAL,
HEALTH DEPARTMENT, ANCON HOSPITAL,
ANCON, C. Z., September 22, 1920.

To all concerned—In order to accommodate those employees who, on account of their hours of work, are unable to visit their relatives sick in the wards of Section "A," Ancon Hospital, during the visiting hours now authorized, commencing at once, an additional visiting hour from 6.30 p. m. to 7.30 p. m. on Tuesdays, Thursdays, and Saturdays is hereby authorized, subject to the present rules and regulations governing visiting hours in Ancon Hospital.

L. T. HESS,
Superintendent.

Price of Empty Cement Bags.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA, C. Z., September 28, 1920.

HEADS OF DEPARTMENTS AND DIVISIONS:

Under new cement contract, W-100792, R-7272-A, the price of empty bags, effective September 27, 1920, on which date the new price of cement is effective, is 25 cents each instead of 8½ cents as heretofore.

In order that empty bags returned by divisions may be properly priced and accounted for, please arrange for inventory of all cement bags, both full and empty, on hand as of September 27, 1920, reporting same to this office not later than October 3.

The prompt attention of all concerned will be appreciated.

M. D. SMITH,
General Storekeeper.

Binders for The Panama Canal Record.

Cardboard covers, punched and fitted with brass fasteners, forming binders for those who wish to keep a file of the current volume, are offered for sale for 25 cents. Orders may be addressed to THE PANAMA CANAL RECORD Balboa Heights, Canal Zone.

Offices of The Panama Canal and the Panama Railroad may secure binders on application to the Executive Office.

Cable Notice.

Western Union advises that the rate to Tahiti Island via British Pacific is now 10 cents per word more than via British Pacific as quoted in the tariff book.

September Rainfall for Three Years.

Stations.	INCHES. 1918	1919	1920	Station average.	Years of record.	Rainy days, 1920.
Pacific section—						
Balboa	6.58	8.46	9.56	7.15	22	21
Balboa Heights	7.03	10.84	9.14	7.94	24	22
Miraflores	6.97	8.33	10.49	9.25	12	22
Pedro Miguel	7.27	9.38	13.68	9.24	13	23
Rio Grande	7.81	10.89	15.81	10.74	16	24
Central section—						
Culebra	10.01	11.73	18.72	11.03	31	21
Camacho	9.12	12.21	17.18	10.89	15	20
Empire	9.25	11.04	18.93	9.51	17	22
Gamboa	7.60	9.39	12.68	10.44	38	24
Juan Mina	11.53	13.85	12.17	12.08	10	23
Alhajuela	11.07	9.35	8.90	11.45	22	26
Vigia	13.24	11.96	11.51	12.91	13	25
Frijoles	12.87	13.50	11.00	11.30	9	....
Trinidad	9.04	8.44	6.12	10.62	13	21
Monte Lirio	12.10	15.48	9.12	12.58	13	28
Atlantic section—						
Gatun	7.27	8.42	6.62	9.84	16	22
Brazos Brook	13.79	10.55	8.31	11.98	15	21
Colon	15.34	11.74	6.81	12.54	50	19
Porto Bello	.....	14.37	10.02	13.00	8	25
Bocas del Toro	2.26	6.70	8.44	6.31	12	17

Rainfall from September 1 to September 30, Inclusive.

STATIONS.	Maximum in 1 day.	Date.	Total.
Pacific section—	*Ins.*		*Ins.*
Balboa	4.93	21	9.56
Balboa Heights	4.24	21	9.14
Miraflores	3.56	21	10.49
Pedro Miguel	3.61	21	13.68
Rio Grande	4.34	21	15.81
Central section—			
[1] Culebra	4.13	22	18.72
[1] Camacho	3.85	22	17.18
Empire	4.64	21	18.93
Gamboa	2.02	25	12.68
[1] Juan Mina	3.36	22	12.17
Alhajuela	1.40	5	8.90
Vigia	1.79	2	11.51
[1] Darien	.90	8	6.62
[1] Trinidad	1.50	22	6.12
[1] Monte Lirio	1.85	12	9.12
Atlantic section—			
Gatun	1.86	10	6.62
[1] Brazos Brook	1.46	3	8.31
Colon	1.97	2	6.81
[2] Bocas del Toro	1.86	13	8.44
[1] Porto Bello	1.57	22	10.02

[1] Standard rain gauge—readings at 5 p. m. daily.
Automatic rain gauge at unstarred stations—values, midnight to midnight.
[2] Standard rain gauge—readings at 8 a. m. daily.

Sale of Used Building Material.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., October 23, 1920, and then opened, for the purchase of lumber, roofing iron, etc., recovered from 13 buildings located on site of former Panama Railroad stables, Colon. Form of proposal may be had at office of the Chief Quartermaster or district quartermaster, Cristobal.

Sale of Roofing Iron.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., October 23, 1920, and then opened, for the purchase of about 2,500 pieces of used roofing iron stored on rear skidway of Panama Railroad material yard, Cristobal. Form of proposal may be had upon application to the office of the Chief Quartermaster, or the storekeeper at Cristobal. The Panama Canal reserves the right to reject any or all bids.

Sale of Brown Hoist at Cristobal.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., October 30, 1920, and then opened, for the purchase of a "Fast Plant" for handling coal and general merchandise, manufactured by the Brown Hoisting Machinery Company, Cleveland, Ohio. This plant has been used by the Panama Railroad Company at Cristobal for handling coal since 1906, and is now located at dock 14, Cristobal, C. Z. The plant is no longer required and bids are solicited for the entire hoisting plant, including all parts above the rails on which it now stands, together with all spare parts now on hand which were purchased for use on this plant. Detailed description and form of proposal may be had upon application to the office of the Chief Quartermaster. The Panama Canal reserves the right to reject any or all bids.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., October 5, 1920.

The following insufficiently addressed mail matter has been received in the office of the Director of Posts and may be obtained upon request of the addressees. Request for forwarding may be made by telephone calling No. 182, Balboa:

Alexander, Addie
Anderson, Mrs. G. C.
Bedore, Phillip
Bentley, Robert
Berrios, Jesus
Codding, Mrs. Earl
Collins, Mrs. Nellie R.
Curtis, John
Donovan, John F.[1]
Euren, Vilhelm
Flater, Mrs. J. H.
Harris, Cristie
Houston, R. H.[2]
Kemper, Miss Hulda
King, Paul
Lynch, John
Mathews, M. M.[2]
Morrison, Murdock
McCoy, Sam
Oliver, Edwin M.
Read, Mahlom M.
Rehberg, Louis W., Box 646
Richardson, A. R.[1]
Sabeda, Sra. Senarina
Scott, Miss Ellen
Sexton, John J.[2]
Shepherdson, Archie
Stewart, P. S., Box 54
Wilmer, Mrs. Richard
Wright, Arthur W.[2]
Wright, Davie E.[2]
Wright, Myron S.[2]
Woodward, Wm. S.[2]
Zelles, Albert M.[2]

[1] Papers. [2] Card.

Hotel Aspinwall Launch Schedule.

Following is the schedule of launch service maintained by the Supply Department between Balboa and the Hotel Aspinwall on Taboga Island:

Daily.

Leave Port Captain's boat landing, near dock 19	4.30 p. m.
Leave Taboga	6.20 a. m.

Sundays and Holidays.

Leave dock 19, Balboa	10.00 a. m.
Leave Taboga	6.30 a. m.
Leave Taboga	6.30 p. m.

Saturdays and days preceding holidays.

Leave dock 19, Balboa	10.00 a. m.
Leave dock 19, Balboa	4.30 p. m.
Leave dock 19, Balboa	7.00 p. m.
Leave Taboga	6.20 a. m.
Leave Taboga	12.30 p. m.

Fares (each way)—Employees, 40 cents; nonemployees, 65 cents; children of employees over 6 and under 12 years old, 30 cents; of nonemployees, 45 cents.

Hotel patrons desiring to send trunks should arrange to have them delivered at the launch landing by 9.30 a. m., addressed to themselves, care of Hotel Aspinwall. Freight will be transported on the a. m. trip on Mondays, Thursdays, and Saturdays.

For further information address Manager, Hotel Aspinwall, via Balboa, C. Z.

COMMISSARY NOTE.

Hallowe'en Paper Novelties.

The Commissary Division is offering the most complete line of Hallowe'en specialties ever handled in the retail stores. Attractive paper novelties and bells in orange and black retail at prices ranging from 5 cents to 14 cents each; and there are cake and fruit daggers displaying witches' heads, pumpkins and other figures emblematic of All Saints' Eve, which are sold for only 8 cents the set of 12. Paper hats, decorated in the traditional Hallowe'en fashion are to be had, as well as complete party outfits, consisting of place cards, bonbon boxes, candle shades, pumpkin decorations, and game cards, which are very modestly priced. One may also obtain special Hallowe'en tally cards with witches, cats, skeleton heads, and other appropriate silhouettes. Place cards, nut and candy trays, pumpkin head garlands, etc., are among the items which will appeal to the hostess. This line will be placed on sale on Monday, October 18. Despite the fact that requisition was placed in ample time, delivery of crepe paper for this occasion has not yet been received. However, it is hoped that the shipment in question will arrive prior to Hallowe'en.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Entered as second-class matter, February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Volume XIV. Balboa Heights, C. Z., October 20, 1920. No. 10.

Charges for Handling Lines.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
BALBOA HEIGHTS, C. Z., October 11, 1920.

To all concerned—Charges for handling lines covered by paragraph 5, Item 4, of Supplement No. 2 to Tariff No. 4, Schedule of Rates for Supplies and Services Furnished to Shipping and Allied Interests at the Panama Canal, issued September 1, 1920, will not be applied, and charges for such services will be made only in accordance with rates originally appearing under Item 4 of Tariff No. 4, issued May 1, 1920.[1]

CHESTER HARDING,
Governor, The Panama Canal.
President, Panama Railroad Company.

[1] Paragraph 1 of Item 4 has been modified, under a circular dated October 6, effective October 8, making the charge for each man furnished for the trip through the Canal $4 instead of $3.50. The following are the charges now in effect:

ITEM 4—HANDLING LINES.

1. For each man furnished by The Panama Canal on board vessels for a complete trip through the Canal, for the purpose of handling lines and locomotive wires on board such vessels, to promote their safety while being passed through the locks, $4.
2. For each man furnished by The Panama Canal on board vessels, to provide a sufficient number to handle lines when necessary to shift vessels from one dock or berth to another, $2.
3. No charge will be made for handling lines at docks on the arrival or departure of a vessel, but whenever launch service is used in connection with tying up a vessel a charge will be made for launch service at rates fixed in this tariff.
4. If for reasons other than the fault of The Panama Canal, a vessel fails to start through the Canal on the day the men for handling lines are placed on board such vessel, a charge of $1 per man will be made in addition to the regular charge of $4 per man for the transit of the Canal.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending October 16, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Ulua	United Fruit Co.	October 10	October 10	61	(1)
Caribbean	Panama Railroad Cattle Industry		October 10		3
Salvador	Pacific Steam Navigation Co.		October 11		688
Gen. G. W. Goethals	Panama Railroad Steamship Line		October 11		3,156
Balboa	Colombian Maritime Co.		October 13		172
Europa	Italian Steamship Co.	October 10	October 13	376	1
Advance	Panama Railroad Steamship Line	October 10	October 14	505	446
St. Joseph	French Steamship Line	October 10	October 16	136	(1)
Peru	Pacific Steam Navigation Co.	October 10		521	
Delft	Dutch Steamship Line	October 11	October 14	298	(1)
Parismina	United Fruit Co.	October 12	October 13	845	9
Toloa	United Fruit Co.	October 13	October 13	854	6
Quillota	Pacific Steam Navigation Co.	October 13	October 15	463½	457
Mantaro	Peruvian Line	October 13		3,325	
Carrillo	United Fruit Co.	October 13	October 14	48	84
Allianca	Panama Railroad Steamship Line	October 14		229	
Caribbean	Panama Railroad Cattle Industry	October 14		300	
Colon	Panama Railroad Steamship Line	October 14		10	
Manavi	Pacific Steam Navigation Co.	October 14		260	
Ulysses	Panama Railroad Steamship Line	October 15		11,995	
Palena	Chilean Steamship Co.	October 15		21	
Leon XIII	Spanish Steamship Line	October 16		462	
Acajutla	Pacific Steam Navigation Co.	October 16		180	

[1] No cargo laded.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, October 16, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Havilah	9	18.50	10	6.10	10	13.46	....	....	American	Admiral Line (S. B.)	402.5	53.0	18.8	Antwerp	San Francisco	General	4,170	6,525	4,748
Kansas [1]	10	6.38	10	7.18	10	15.40	14	12.30	American	United States Navy	456.0	76.1	27.0	Philadelphia	Samoa Island	....	....	....	....
Argonne	10	9.52	10	10.25	10	18.35	10	19.36	American	Argonne Steamship Co	385.0	51.2	26.0	Norfolk	Antofagasta	Coal	6,970	5,878	4,335
Gera	10	9.40	10	11.05	10	18.40	10	22.00	British	Philipps, Philipps Co	476.2	60.0	19.0	Liverpool	Portland	Ballast	....	8,732	6,039
Salvador	4	20.38	11	6.15	11	12.54	11	16.21	British	Pacific Steam Navigation Co	215.0	33.0	13.1	Cristobal	Champerico	General	675	1,213	692
Walton Hall	10	17.27	11	6.25	11	14.06	11	15.02	British	Ellerman Hall Line	402.0	52.0	23.6	New York	Auckland	General, benzine.	5,300	5,522	3,840
Onton	11	15.18	12	6.20	12	13.26	12	14.40	Spanish	Jose Marie Urquijo	310.0	42.9	12.6	Bilbao	Caleta Colosa	Ballast	....	2,849	2,061
Diablo	12	7.19	12	8.00	12	15.55	....	....	American	Admiral Line (S. B.)	402.5	53.0	17.3	Antwerp	San Francisco	Sand, wine, etc.	3,060	6,562	4,893
Balboa	8	14.20	13	6.08	13	14.43	13	21.38	American	Colombian Maritime Co	190.0	29.1	13.0	Cristobal	Buenaventura	General	172	741	350
Europa	10	9.55	13	6.15	13	13.54	13	15.00	Italian	La Veloce Steamship Line	454.0	53.0	25.1	Genoa	Valparaiso	General	1,000	8,051	4,915
Santa Ana	12	19.00	13	6.16	13	12.49	13	13.35	American	W. R. Grace & Co	360.2	51.6	22.0	New York	Valparaiso	General	2,076	5,842	4,150
L. J. Drake	12	15.16	13	6.25	13	14.47	(3)	....	American	Standard Oil Co	419.0	57.0	26.0	Tampico	Balboa	Crude oil	10,500	7,439	5,554
Alaska Maru	12	16.00	13	6.52	13	16.05	13	17.45	Japanese	Osaka Shosen Kaisha	420.0	56.0	24.6	New York	Hongkong	General	5,683	7,460	5,307
West Elcajon	13	4.20	13	7.14	13	17.32	14	6.42	American	McCormick & McPherson (S. B.)	409.6	54.2	24.1	Norfolk	San Diego	Coal	7,065	6,649	5,066
Mobile City	13	8.37	13	9.10	13	18.20	13	19.10	American	Isthmian Steamship Corporation	395.5	55.0	26.0	Mobile	Shanghai	Steel	6,800	7,285	5,256
Sciota [2]	3	16.32	13	9.20	13	15.54	14	21.42	American	United States Navy	....	....	....	Coco Solo	Balboa	....	....	....	....
Durango	13	9.05	13	11.05	13	20.00	14	8.37	Spanish	Naviera Vascorqado	325.0	47.0	12.0	Teneriffe	Iquique	Ballast	....	3,262	2,333
Navarra	13	12.32	13	12.50	13	20.02	13	21.12	Spanish	Naviera Mundoca	340.0	41.0	15.0	Cardiff	Iquique	Ballast	....	3,256	2,102
Delft	11	6.35	14	6.15	14	13.36	15	7.52	Dutch	Royal Netherlands W. I. Mail	370.0	50.0	18.0	Hamburg	Antofagasta	General	2,213	5,862	4,393
Cristobal	9	8.14	15	6.05	15	12.41	15	13.49	American	Panama Railroad Steamship Line	489.0	58.0	19.3	New York	Mejillones	Ballast	....	10,696	8,063
Persian Prince	15	13.50	16	6.20	16	13.53	16	14.50	British	Prince Line, Ltd	417.0	56.0	24.9	New York	Yokohama	General	7,000	5,842	4,061
Steel Ranger	16	6.52	16	7.10	16	14.29	16	16.31	American	Isthmian Steamship Line	424.2	56.2	23.0	New York	Vancouver	General	7,100	....	....
Saint Joseph	10	16.25	16	9.30	16	17.20	16	18.16	French	Cie. Gle. Transatlantique	398.0	51.0	18.4	Havre	Valparaiso	General	1,542	5,979	4,170
Mesopotamia	16	6.00	16	11.00	16	18.35	16	19.45	British	Westminster Steamship Co	318.0	58.0	....	New York	Yokohama	General	5,114	....	....

[1] Battleship. [2] Tug. [3] Returned north through Canal.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Peru	9	21.25	10	10.18	10	18.00	....	....	British	Pacific Steam Navigation Co	350.0	43.1	17.3	Coronel	Cristobal	General	583	4,095	2,655
Lake Granby	10	11.59	10	12.52	10	21.05	11	5.44	American	Warren Transp. Co. (S. B.)	251.0	43.6	22.0	San Antonio	New Orleans	Nitrates	3,560	2,772	1,767
Haynie	10	22.15	11	7.58	11	16.25	11	23.55	American	Sudden & Christensen (S. B.)	402.5	53.0	24.0	Seattle	Grangemouth	Lumber	6,500	6,524	4,756
Indiana Harbor	11	9.30	11	10.12	11	18.10	12	6.00	American	Lind Navigation Corporation	251.0	43.6	24.6	Antofagasta	Baltimore	Nitrates	3,749	2,857	1,784
Steel Mariner	11	14.15	12	7.16	12	14.28	12	17.10	American	U. S. Steel Products Co	424.2	56.2	26.6	Mejillones	Baltimore	Nitrates	8,600	7,539	5,448
Heffron [4]	12	8.00	12	8.50	12	15.30	....	....	American	United States Army	440.0	56.0	17.0	Vladivostok	Trieste	General	945	8,349	6,201
Tannenberg	12	14.00	12	14.45	12	23.32	13	8.40	British	Philipps, Philipps Co	486.0	58.0	27.0	Portland	London	Wheat	10,227	9,615	6,525
Mantaro	12	14.30	13	6.29	13	14.15	....	....	Peruvian	Peruvian Line	360.0	46.0	22.6	Callao	Cristobal	General	3,325	4,838	2,959
Mont Cenis	12	19.00	13	7.42	13	16.05	13	17.30	French	French Navigation Co	365.7	49.1	22.6	San Francisco	Gibraltar	Wheat	5,336	4,662	3,512
D. G. Scofield	13	04.30	13	8.20	13	16.42	13	17.46	American	Standard Oil Co	439.5	58.1	30.6	San Francisco	Philadelphia	Lubricating oil	11,000	8,912	6,254
Santa Luisa	12	21.30	13	9.00	13	16.11	13	17.27	American	W. R. Grace & Co	360.2	51.6	21.3	Valparaiso	New York	(5)	....	5,649	3,975
Quillota	13	3.00	13	10.24	13	17.06	15	2.50	British	Pacific Steam Navigation Co	361.4	46.2	18.2	Guayaquil	New York	General	1,482	4,620	2,848

[4] United States Army transport. [5] Nitrate, copper, and vanadium.

Rimutaka	13	2.30	13	10.36	13	18.00	13	22.20	British	New Zealand Shipping Co	457.7	58.2	26.0	Wellington	London	Frozen, general	5,300	9,125	6,848
Red Hook	13	1.30	13	10.53	13	19.10	13	22.50	American	Todd Dry Dock and Const. Co.	380.3	53.1	23.0	Kahului	New York	Pineapples	6,300	5,657	4,138
Caddo	13	13.00	13	13.45	13	21.19	14	1.15	American	Standard Oil Co	415.0	55.2	21.0	Iquique	Tampico	Ballast		6,438	4,391
S. V. Harkness	8	12.35	14	6.44	14	13.55	14	18.00	American	Standard Oil Co	419.4	57.2	18.0	Iquique	Tampico	Ballast		7,443	5,545
Richconcal	13	16.00	14	6.58	14	14.36	14	16.20	American	Struthers & Dixon (S. B.)	435.0	56.0	20.6	Iquique	Tampico	Ballast		7,642	5,327
Cuyamaca	13	15.00	14	7.27	14	15.45	15	9.05	American	McAllister Brothers (S. B.)	420.7	54.0	21.6	San Diego	Tampico	Ballast			
Minnie de Larrinaga	13	17.00	14	7.52	14	16.35	15	17.49	British	Larrinaga & Co., Ltd	420.0	54.0	24.0	Portland	Colon [8]	Wheat in sacks	8,088	6,421	4,904
Manavi	14	5.45	14	8.22	14	17.00			British	Pacific Steam Navigation Co.	216.0	35.1	12.0	Guayaquil	Cristobal	General	260	1,357	884
Tsurugisan Maru	14	9.00	14	11.06	14	19.35	14	22.30	Japanese	Mitsui & Co	356.0	45.2	24.0	Iquique	Cristobal [8]	Nitrates	5,240		
Alliance	14	8.25	14	11.50	14	18.30	17	14.58	American	Panama Railroad Steamship Line	335.0	42.0	18.6	Guayaquil	New York	General	1,306	4,120	2,670
Brant [6]	12	23.00	14	12.56					American	United States Navy	180.0	35.6	13.6	San Diego	Cristobal [8]				
L. J. Drake	13	14.37	15	7.08	15	13.48	15	13.48	American	Standard Oil Co. of New Jersey	419.0	57.0	9.6	Balboa	Tampico	Ballast			
Palena	15	3.00	15	7.39	15	14.36	18	7.07	Chilean	South American Steamship Line	350.0	42.1	20.6	Valparaiso	Cristobal	General	53.55	3,666	2,577
Gorbea Mendi	15	3.00	15	7.55	15	15.25	16	6.27	Spanish	Sota & Aznar	365.0	50.2	22.0	Tocopilla	Cristobal [8]	Nitrates	6,118		
Essex	15	2.30	15	8.30	15	16.10	15	21.10	British	Federal Steam Navigation Co.	460.4	58.2	22.0	Gisborne	New York	General	6,000	9,099	6,473
Lake Fanbush	15	9.40	15	10.38	15	18.50	15	21.25	American	N. O. & S. A. S. S. Co. (S. B.)	251.0	43.5	25.8	Iquique	New Orleans	Nitrate of soda	3,850	2,861	1,816
Asuncion	15	13.30	15	14.01	15	21.02	17	18.07	American	J. W. McNear	242.0	42.0	20.0	San Francisco	Copenhagen	Gas oil	(9)		
Theodore Roosevelt [7]	15	18.30	16	6.44	16	14.15	16	14.15	Norwegian	Fred Olsen & Co	445.0	55.5	28.11	Antofagasta	Charleston	Nitrates	10,000	7,593	5,637
Gen. G. W. Getty [2]			16	7.54	16	14.26			American	United States Army	98.0	22.0		Balboa	Cristobal				
Acajutla	16	10.00	16	11.57	16	18.04			British	Pacific Steam Navigation Co.	215.7	33.5	12.7	Champerico	Cristobal	Coffee, hides, etc.	180	1,273	706
St. Hilary [2]	16	11.20	16	13.41	16	19.00			British	British Ministry of Shipping	135.3	29.1	14.0	Arica	Cristobal [8]	Ballast			
Liguria	16	11.20	16	14.26	17	9.57			German	British Ministry of Shipping	373.0	50.1	21.0	Arica	Cristobal [8]	General	5,000		

[6] Mine sweeper *No. 24*, anchored in Gatun Lake. [7] Motor ship. [8] For orders. [9] 19,000 barrels. Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
October 10	Ulua	United Fruit Co	Port Limon.	October 10	Caribbean	Panama Railroad Cattle Industry	Cartagena.
October 10	Advance	Panama Railroad Steamship Line	New York via Haiti.	October 10	Ulua	United Fruit Co	New York via Habana.
October 11	Arabia [10]	Colon Import and Export Co.	Colon.	October 11	Gen. G. W. Goethals	Panama Railroad Steamship Line	New York via Haiti.
October 12	Parismina	United Fruit Co	New Orleans.	October 13	Lake Ennis	United States Shipping Board	Bluefields.
October 12	Lake Ennis	United States Shipping Board	Newport News.	October 13	Toloa	United Fruit Co	Port Limon.
October 12	Toloa	United Fruit Co	New York via Habana.	October 13	Parismina	United Fruit Co	New Orleans and wayports
October 13	Carrillo	United Fruit Co	New York via Kingston.	October 14	Astmahco III	Astoria Mahogany Co	New York.
October 14	Colon	Panama Railroad Steamship Line	Cartagena.	October 14	Advance	Panama Railroad Steamship Line	New York via Haiti.
October 14	Caribbean	Panama Railroad Cattle Industry	Cartagena.	October 14	Carrillo	United Fruit Co	New York and wayports.
October 15	Harald	United Fruit Co	Cartagena.	October 15	Harald	United Fruit Co	Tela, Honduras.
October 15	Ulysses [11]	Panama Railroad Steamship Line	Norfolk.	October 16	Arabia [10]	Colon Import and Export Co.	Colon.
October 16	Leon XIII	Spanish Steamship Line	Barcelona via wayports.				
October 16	St. Anne [2]	British Government	Southampton via waypts.				

[10] Motor schooner. [11] Collier.

PORT OF BALBOA.

October 16	U. S. S. Cleveland [12]	United States Navy	Guayaquil.				

[12] Cruiser. *Other than ships passing through the Canal.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending October 16, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	*Tons.*
Salvador	Pacific Steam Navigation Co.	October 11	October 11	.....	3
Balboa	Colombian Maritime Co.	October 13	October 13	.....	34
Donald McKay	United States Shipping Board	October 16	.....	.....	152
Quillota	Pacific Steam Navigation Co.	October 13	October 13	2	.....
L. J. Drake	Standard Oil Co.	October 13	October 15	10,500	.....
Palena	South American Steamship Line	October 15	October 15	32	.....
Acajutla	Pacific Steam Navigation Co.	October 16	October 16	1	.....

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended October 16:

Submarines *R-21* and *R-27*, periodical overhaul; steamship *Marne*, general repairs; dredge *No. 83*, general repairs; launch *Captain Wilhelm*, hull repairs and installation of new engine; steamship *Hodges*, general repairs; barge *No. 121*, for conversion into garbage scow; barge *No. 131*, general repairs; steamship *Nokatay*, installation of main feed pump; *Hayden*, repairs to main turbine and feed pump, and miscellaneous engineer's department work; tug *Bohio*, general repairs; steamships *Donald McKay*, repairs to boiler, blower engines, and steering gear; *Diablo*, repairs to main turbine and air pumps; *Havilah*, repairs to boiler and air pumps; *S. V. Harkness*, heavy boiler and engine repairs; U. S. S. *Kansas*, repairs to broken crankshaft; steamship *Eastern Cloud*, removal of rope from around propeller.

The following vessels were at Cristobal shops for repairs during the week ended October 18:

Steamships *Colon*, *Allianca*, *Ulysses*, miscellaneous repairs and painting to engine, deck, and steward departments; *Mantaro*, electric weld boiler stays; renew tubes, etc.; U. S. A. T. *Heffron*, scale boilers, repair piping and pumps, make new boom, etc.; D. A. D. G. *No. 76*, remetal and refit all crank pin brasses and eccentric straps in main engine; repair thrust shoes, sanitary pump, piping, etc.; steamships *Manavi*, retube and weld crack in main condenser; renew tubes and weld boiler, etc.; *Yosemite*, overhaul control valve; make telmotor parts, etc.; barges *Nos. 150* and *151*, scale and paint; patch hull, etc.; U. S. S. *C-285*, overhaul main and auxiliary engines; steamship *Peru*, weld hawse pipe, install pumps, etc.; U. S. S. *R-25*, repair and alter engine foundation; launch *Pequeni*, overhaul both engines; steamships *Cuba*, repair bow, L. P. valve, dynamo, etc.; *Delph*, *Adria*, *Caribbean*, U. S. A. T. *Thomas*, tug *St. Anne*, U. S. S. Eagle *No. 38*, dredge *Gamboa*, minor repairs.

Steamers to Sail for Port Limon on Wednesdays.

The United Fruit Company has advised that the day of sailing of its steamers from Cristobal to Port Limon direct has been changed from Tuesday to Wednesday. Effective with the sailing of the *Ulua* on October 6, the rate for first-class passage from Cristobal to Port Limon is $25, minimum, and $35 for bed or berth in a room with private bath. There is no reduced rate for this voyage for Canal employees.

Surplus Run-off of Gatun Lake.

An illustration of the quantity of water involved in the surplus run-off of Gatun Lake under present water usages is afforded by a report of the Chief Hydrographer which shows that the water spilled by a recent operation of 1 gate at Gatun spillway, from 3.12 p. m., on the 12th of October, to 11.12 a. m., on the 16th, a period of 92 hours, would have raised Gatun Lake 10 inches above its current elevation of 86 feet above sea level; or it would have filled Miraflores Lake from its bottom elevation to + 54 feet, four and one-half times.

Raising Surface of Gatun Lake.

The elevation of the surface of Gatun Lake, at 86 feet above sea level on October 19 is to be raised to 86.5 feet, by shutting down the gates at the spillway. It will be allowed to vary between 86.5 and 86.7 until the latter part of November, when it will be raised to elevation 87 feet, to provide a storage supply for the dry season.

Excursion to Pearl Islands.

Tickets for the excursion to the Pearl Islands from Balboa on October 24, on the salvage steamer *Favorite*, were placed on sale in the Canal restaurants at Cristobal, Gatun, Pedro Miguel, Balboa, and Ancon in the morning of October 20. The number to be sold will be limited to 175. Under the schedule planned, the *Favorite* will leave Pier 18 at Balboa at 7 a. m., go to Taboga to take on supplies for a buffet luncheon, and proceed to the archipelago, arriving there about noon. After a cruise and a stop at San Miguel, the passengers will return to Taboga in time for dinner at the Hotel Aspinwall and after dinner will return to Balboa. The charge of $5 per person covers transportation and the 2 meals.

Correctible Physical Defects in Children.

In anticipation of the annual physical examination of school children, the Chief Health Officer invites the attention of parents to the following circular, covering the method to be followed, and invites their careful cooperation in carrying out the recommendations which may be made by the examining physicians. In connection with last year's examinations, 951 children were found with correctible defects for which they were recommended to take treatment, but only 162 of these applied for the treatment. The importance of corrective treatment is universally recognized by health and physical culture authorities, and the Chief Health Officer feels it incumbent on him to emphasize this point and urge on parents their responsibility in the matter. The circular follows:

THE PANAMA CANAL, HEALTH DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 8, 1920.

CIRCULAR No. 185:

To District Physicians, Balboa, Ancon, Pedro Miguel, Gatun; Superintendent, Colon Hospital—The annual physical examination of the white school children in the Canal Zone schools, will be made in all districts of the Canal Zone, during the week commencing Monday, November 8. This examination will be thorough and special attention will be given to obtaining information on the items covered by the physical examination card, form 8899.

Particular attention should be given to children entering school for the first time. When a pupil desires to enter school after the annual physical examination has been made, the teacher will enter his or her name on the examination card and send the pupil with the card to the district physician who will then make the required examination before the pupil is regularly admitted to the school.

The purposes of this examination are: (1) Early recognition of cases of contagious disease; (2) early detection and treatment of physical defects; (3) education of parents on the necessity for treatment of physical defects in the growing child.

A careful record of the examination should be made on the child's individual card, 8899, and when the examination has been completed a report of the same shall be made—on or before January 1, 1921—to this office, covering:

1. Number of physical examinations made.
2. Number found needing treatment.
3. Number with other defects than those of teeth only.
4. Number with defects of teeth as only defect.
5. Defects found:
   (*a*) Defective teeth; (*b*) defective vision; (*c*) defective hearing; (*d*) defective nasal breathing; (*e*) hypertrophied tonsils; (*f*) miscellaneous defects; (*g*) total defects.
6. Number of cases treated.

Children found suffering from any acute contagious disease should, of course, be excluded from school. Children found suffering from any defect or infirmity requiring treatment should be reported to their parents on proper forms, 8898 (old PC 898) and PC-2307-1. You are especially directed to cross out the words "no charge will be made for the operation" on form 8307, as this has changed since the form was gotten out. If, after a few days, the parent has not sent the child to a physician for treatment, the case should be followed up and an endeavor made to induce the parent to do so. In the event of failure of a child to report for treatment for defect or disease (other than for defective teeth) discovered at this examination, report will be made to the Chief Health Officer.

The annual examination of school children for vaccination will be held at the same time, the necessary vaccinations being done and a record of the same made on the physical examination record card. Certificates of successful vaccination may be furnished to pupils and teachers entitled to them.

Please also go through the colored schools in your district and report any defects in children found which, in your opinion, render them unfit to pursue their studies.

All forms to be used in connection with the examination will be sent direct to the schools.

Please advise the physical director of your local clubhouse when you are ready to start the examination, and he will assist you in taking weight, measurements, etc.

H. C. FISHER,
Chief Health Officer.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights (telephone 286):

F-1 addressograph operator, $900 to $1,200 a year; automatic 3-A addressograph feeder, $1,100 to $1,200 a year; automatic 3-A addressograph operator, grade 1, $1,200 to $1,500 a year; automatic 3-A addressograph operator, grade 2, $1,500 to $1,800 a year; form 304; (male and female); No. 563; age, 18 years and over; vacancies exist in the Departmental Service, Washington, D. C., November 3 and December 15, 1920.

Agent for trade or industrial education (male), $3,000 to $3,500 a year; No. 522; form 2118; age, below 50 years; vacancy in Federal Board for Vocational Education; November 23, 1920.[1]

Assistant economist in marketing, $2,400 to $3,000 a year; junior assistant economist in marketing, $1,800 to $2,400 a year (male and female); form 1312; age, 22 years and over; vacancies in the Bureau of Markets, Department of Agriculture, Washington, D. C.; January 19, 1921.

Assistant in marketing dairy products, $2,100 to $3,000 a year; junior assistant in marketing dairy products, $1,500 to $2,100 a year (male and female); form 2118; age, 24 years but not 50 years; vacancies in the Bureau of Markets, Department of Agriculture, Washington, D. C.; November 23, 1920.[1]

Associate farm economist (livestock accountant), (male and female), $3,240 to $3,840 a year; form 2118; age, 21 years but not 45 years; vacancy in the office of Farm Management and Farm Economics, Department of Agriculture, Washington, D. C.; November 30, 1920.[1]

Educational director, $1,800 to $2,400 a year; teachers, $1,600 to $2,400 a year (male and female); No. 803-amended; form 1312; age, within reasonable age limits; vacancies in the Federal Board for Vocational Education; August 2, 1920.[1]

Executive assistant (construction), $1,400 to $2,100 a year; technical assistant (construction), $2,400 to $3,500 a year (male and female); form 1312; age, within reasonable age limits; vacancies in the office of the Bureau of Public Health Service, Treasury Department, Washington, D. C.; December 28, 1920.[1]

Forest ranger (male and female), $900 to $1,220 a year; No. 556; form 1312; age, 21 years but not 40 years; vacancies in the Forest Service, Department of Agriculture; October 25, 1920.

Inspector of tanks and tractors (male and female); $1,800 to $2,400 a year; age, 22 years but not 50 years; vacancies in the Ordnance Department at Large; November 9, 1920.[1]

Land law clerk (male and female), $1,020 to $1,600 a year; No. 545; form 1312; age, 20 years but not 45 years; vacancies in Departmental Service and Department of the Interior; November 3 and December 15, 1920.

Lithographic press helper (male and female), $700 a year; No. 540; form 304; age, over 16 years and within reasonable age limits; vacancies in Coast and Geodetic Survey; November 3, 1920.

Lithographic stone polisher, stone planer, and stone grainer (male and female), $900 a year; No. 560; form 1800; age, 20 years and over; vacancies in the Engraving Division, Geological Survey, Washington, D. C.; November 9, 1920.[1]

Master shipfitter (male and female), $9.92 per diem; No. 557; form 1312; age, 30 years and over; vacancy at the Naval Station, New Orleans, La.; November 9, 1920.[1]

Senior engineer, grade 2, civil, electrical, mechanical, signal, structural, telegraph, and telephone (male and female), $2,100 to $2,700 a year; No. 564; form 1312; age, 25 years but not 50 years; vacancies in the Interstate Commerce Commission; December 28, 1920.[1]

Service agent (male and female); $3,600 to $5,000 a year; No. 559; form 2118; age, 30 years but not 54 years; vacancies in the Interstate Commerce Commission; December 28, 1920.[1]

Specialist in cotton classing (male and female), $2,700 to $4,000 a year; No. 360; form 2118; age, 25 but not 60 years; vacancies in the Bureau of Markets, Department of Agriculture; November 23, 1920.[1]

Statistical analyst (male and female), $3,600 to $4,200 a year; No. 558; form 2118; age, 30 years but not 54 years; vacancy in the Interstate Commerce Commission, Washington, D. C.; November 9, 1920.[1]

Superintendent of magazine area (male and female), $2,000 to $3,000 a year; No. 544; form 1312; age, 22 years but not 55 years; vacancies in the Ordnance Department at Large; November 9, 1920.[1]

Tinner (male and female), $1,100 a year; No. 561; form 1800; age, 20 years and over; vacancy in the office of the Secretary of Agriculture, Washington, D. C.; November 9, 1920.[1]

[1]Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings, or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Charles Benjamin	44319	Antigua	Colon	Panama Railroad	Sept. 21, 1920.
Mary Blackman	32055	Barbados	Colon	Panama Railroad	Sept. 26, 1920.
William Hall	20524	Grenada	Panama	Supply Department	Sept. 29, 1920.
Isaiah Olton	35950	Barbados	Panama	Building Division	Sept. 25, 1920.
Edward Butler	29542	Jamaica	Colon	Mun. Eng. Division	Oct. 2, 1920.
Jose Bonillo (Bonilla)	52279	Panama	Bohio	Cattle Industry	Oct. 2, 1920.
James Scott	29652	St. Vincent	Camp Bierd	Mun. Eng. Division	Oct. 5, 1920.
James McPherson	36850	Nassau	Panama	Mechanical Division	Oct. 6, 1920.
Edwin L. Larsen	1479	United States	Miraflores	Pacific Locks	Oct. 8, 1920.
Thomas Rees	3659	United States	Pedro Miguel	Panama Railroad	Oct. 10, 1920.

Official Circulars.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 12, 1920.

CIRCULAR No. 266.

Effective October 9, 1920, Com. E. G. Kintner is designated an accountable official of The Panama Canal, vice Mr. H. H. Evans, and as such will account for all nonexpendable property in use by the Mechanical Division.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
CHESTER HARDING,
Governor.

Sale of Cement Sweepings.

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
BALBOA HEIGHTS, C. Z., October 16, 1920.

To all concerned—The Panama Railroad Company has on hand 465 sacks of cement *ex* the steamship *Cristobal*, October 9, 1920, and 248 sacks *ex* the steamship *Advance*, October 11, 1920, a total of 713 sacks of cement.

This cement, is known as sweepings, or loose cement picked up after the discharge of a steamer. There is very little foreign substance to be found in it, and for almost any concrete work it is just as good as any cement.

We will be glad to have you bid on this lot of cement before 3 p. m., Friday, October 22, 1920. Please make your bids on basis of keeping the bags, and also returning the bags to us.

A charge of 25 cents per bag will be collected when cement is delivered.

This charge will be refunded when bags are returned in usable condition.

W. F. FOSTER,
Acting Superintendent.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., October 18, 1920.

The following insufficiently addressed mail matter has been received in the office of the Director of Posts and may be obtained upon request of the addressee. Request for forwarding can be made by telephone, calling No. 182, Balboa:

Barnett, Mrs. Caroline
Bell, Frank
Bryan, E. E.[1]
Cockrell, Mrs. J. K.
Cravens, Johnnie
Edwards, Miss Glenora
Erickson, A. W.
Faulk, R. R.[1]
Ferguson, D. V.[1]
Greene, Royal K.
Hayward, Thomas J.
Hicks, Olon
Long, Hilbert Chas.
Kephart[1]
Pachas, S.
Prendergast, Harold L.
Rumler, Jose D.
Wadleigh, G. H.
Schliebener, Otto J.

[1]Card.

Administrator's Sale.

The Administrator of Estates, room 301, Administration Building, Balboa Heights, offers for sale, for account of the estate of Edwin L. Larsen, deceased American employee of The Panama Canal, a new 2-piece suit of dark gray tweed (commissary goods) of the following measurements: Coat, 41; trousers, length and waist, both 33½. The clothes may be examined and tried on any weekday between 8 a. m. and 8 p. m. and on Sundays between 8 a. m. and noon, at the tailor shop of Robert C. Smith, No. 1 Calle I, Panama, opposite Smallwood's garage.

The sale price of the suit is $35, and should be paid to the Administrator, who will then order the tailor to release the garments. Persons desiring to offer less than $35 may make written bids on the property, and send them to the Administrator in sealed envelopes, marked "Bid on suit of Edwin L. Larsen, deceased." Bids will be opened in the Administrator's office at 11 a. m., Monday, November 8, 1920, in case the clothes have not been previously sold at the $35 price. No deposit of money is required with bids, and the Administrator reserves the right to reject any or all bids.

Additions to Commissary Stock.

Boot and Shoe Section.

Little Gent's shoes, tennis, rubber sole, brown Army duck, Bals, pr	$1.40
Youths' shoes, tennis, rubber sole, brown Army duck, Bals, pr	1.55
Boys' shoes, tennis, rubber sole, brown Army duck, pr	1.75
Shoes, women's Oxfords, white, Rein-cloth Dutchess heels, Astor last, pr	8.05

Dry Goods Section.

Ammonia, bath, perfumed, 12-oz. bot.[1]	.30
Blouses, boys', striped Madras, turn-over cuffs, ea	1.60
Dress Goods:	
Lawn, cotton, Golden, 40", yd	.82
Lawn, cotton, Golden, 42", yd	.91
Poplin, grosgrain, white, 36", yd	1.15
Hats, straw, trimmed, ea	2.45
Ties, dress, batwing, white, ea	.42

Grocery Section.

Cigars:	
Non Plus Ultra, Ecuadorian, ea	.10
Favoritas, Ecuadorian, ea	.10
Pour la Noblesse, Ecuadorian, ea	.11
Esquisitos, Ecuadorian, ea	.05
Salmon, pink, talls, 1s tin	.17
Vichy, pt. bot	.16

[1]3 cents refund on return of empty bottle.

Sale of Roofing Iron.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., October 23, 1920, and then opened, for the purchase of about 2,500 pieces of used roofing iron stored on rear skidway of Panama Railroad material yard, Cristobal. Form of proposal may be had upon application to the office of the Chief Quartermaster, or the storekeeper at Cristobal. The Panama Canal reserves the right to reject any or all bids.

Sale of Used Building Material.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., October 23, 1920, and then opened, for the purchase of lumber, roofing iron, etc., recovered from 13 buildings located on site of former Panama Railroad stables, Colon. Form of proposal may be had at office of the Chief Quartermaster or district quartermaster, Cristobal.

Locations of Patients, and Visiting Hours, at Ancon Hospital.

The following table shows the distribution of patients in the new Ancon Hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Present number of beds.	Visiting hours.
Section "A"—White American, male:		Tuesdays, Thursdays, and Saturdays, 2 to 4.30 p. m. and 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11 a. m. and 2.30 to 4.30 p. m.
Ward No. 1, Medical Eye and Ear	44	
Ward No. 2, Medical, Eye and Ear	41	
Ward No. 3, Surgical	44	
Ward No. 4, Surgical	41	
Cells (2)	2	
	172	
Section "B":		
White American, female	23	Daily except Sunday, 2 to 4.30 p. m.; 6.30 to 8 p. m. Sundays and holidays, 10 to 11 a. m.; 2 to 4.30 p. m. 6.30 to 8 p. m.
White foreign, female	15	
Nursery	16	No visitors permitted.
Private rooms (40)	46	Daily, 9.30 to 11 a. m.; 2 to 4.30 p. m.; 6.30 to 8 p. m.
Cells (2)	2	
	102	
Section "C":		
Ward No. 9, White foreign, male	39	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 10, Colored, eye and ear, convalescent medical	39	
Ward No. 11, Colored Acute surgical	39	
Ward No. 12, Colored Acute medical	39	
Ward No. 13, Colored Convalescent surgical	39	
Ward No. 14, Colored Convalescent surgical	39	
Cells (6)	6	
Rooms (7)	7	
	247	
Section "D":		
Ward No. 15	41	
Ward No. 16	39	
Ward No. 17, Colored children	32	Wednesdays, Sundays and holidays, 1.30 to 3 p. m.
Ward No. 18, White children	30	Daily, 9.30 to 10 a. m.; 2 to 4 p. m.
Ward No. 19, Colored female medical	41	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 20, Colored female surgical	34	
Rooms (6)	6	
Cells (6)	6	
	229	
Isolation:		No visitors permitted.
Floor No. 1	14	
Floor No. 2	29	
Floor No. 3	28	
Floor No. 4	28	
	99	
Total number of beds	849	

Emergency passes are issued only by and in the discretion of the section nurse.

COMMISSARY NOTE.

Toilet Water.

An item which it is believed will prove popular with the trade is Perfumed Bath Ammonia, recently manufactured by the Commissary Division. An initial shipment has been made to all line stores where this article is now on sale. The price is 30 cents for a 12-ounce bottle.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Volume XIV. Balboa Heights, C. Z., October 27, 1920. No. 11.

Expenses of Operation and Maintenance Compared with Revenues.

During the fiscal year ending June 30, 1920, the ordinary expenses for the operation and maintenance of the Canal, including those of civil government and sanitation, amounted to $6,548,272.43, compared with $6,112,194.77 in 1919, $5,920,342.94 in 1918, and $6,788,047.60 for the year 1917. The proportion of the total overhead charges which was charged into the cost of operation and maintenance in the year 1920, amounted to $3,324,167,10; this is out of a total overhead for the year of $4,738,439,25, including expenses of civil government, hospitals, quarantine, and sanitation, the Executive Department, the Accounting Department, the Washington Office, operation and repairs of storehouses and quarters, lighting of streets, operation of water and sewer systems, and roads, etc.

Offsetting the total expenses for operation and maintenance are the amounts earned for tolls on vessels passing through the Canal, $8,493,082.56; licenses and taxes, court fees, and fines, $153,102.88; interest on balances in banks, $50,000.00; and profits on business operations, $239,686.13, a total of $8,935,871.57.

The revenues earned in excess of current expenses were accordingly $2,387,599.14. The charges for operation and maintenance do not include, with minor exceptions, any allowance for depreciation of plant and equipment, nor do they include any interest charges on the capital investment. The actual cost of the Canal projects estimated for in 1908 up to June 30, 1920, is figured at $367,151,696.38, which may be considered as the capital investment on that date.

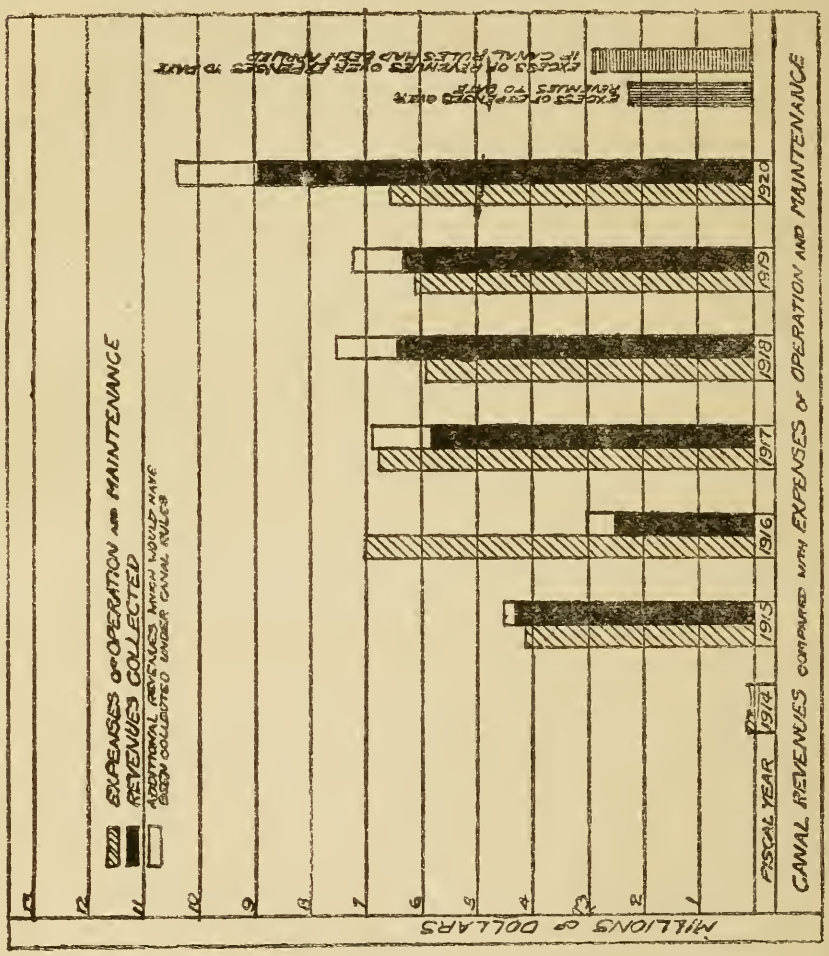
Including expenditures in previous years, the aggregate of expenditures charged to operation and maintenance of the Canal to June 30, 1920, was $36,657,766.89. The revenues offsetting this amounted to $34,426,675.28, less approximately $63,533.03 yet to be refunded on account of erroneous collection of tolls. The recorded deficit in operation and maintenance for the period of Canal operation to June 30, 1920, was therefore $2,231,091.61 plus about $63,533.03, or approximately $2,294,624.64.

The cost of operation and maintenance and the revenues earned during the period of Canal operation, with the variations in the deficit in this account, are shown in this statement:

Fiscal year.	Maintenance and operation, including proportion of overhead.	Revenues.	Revenues in excess of expenses.	Expenses in excess of revenues.	Excess of revenues over expenses to date.	Excess of expenses over revenues to date.
1914....	$166,030.91	[1] $14,618.68	.....	$151,412.23	.....	$151,412.23
1915....	4,123,128.09	4,343,383.69	$220,255.60	.....	$68,843.37	.....
1916....	6,999,750.15	[2] 2,558,542.38	.....	4,441,207.77	.....	4,519,177.92
1917....	6,788,047.60	5,808,398.70	.....	979,648.90	.....	5,352,013.30
1918....	5,920,342.94	6,411,843.28	491,500.34	.....	.....	4,860,512.96
1919....	6,112,194.77	6,354,016.98	241,822.21	.....	.....	4,618,690.75
1920....	6,548,272.43	8,935,871.57	2,387,599.14	.....	.....	2,231,091.61
Total..	$36,657,766.89	$34,426,675.28	$3,341,177.29	$5,572,268.90	.....	.....
Balance, deficit of.....		.....	.....	.....	.....	$2,231,091.61

[1] Tolls on barges towed through the Canal, prior to opening to commercial ships.
[2] Heavy drop due to closing Canal 7 months on account of slides.

Had the original Panama Canal rules of measurement and collection been used, the deficit of $2,231,091.61 as of June 30, 1920, would not have existed, assuming the same quantity of traffic; instead, the account would have shown on June 30, 1920, an excess of revenues over expenses amounting to $2,878,812.63.



The loss through not applying the Canal rules alone, but limiting the collections by the proviso that the amount collectible shall not exceed the equivalent of that obtained by multiplying the net tonnage as determined by measurement for registry in the United States by $1.25, amounted to $1,445,117.50 in the fiscal year 1920, in addition to which $10,948.49 was refunded to operators for excess collections in previous years. The total loss, comprised of lessened collections and refunds, has amounted to $5,109,904.24 to the end of the fiscal year 1920, in which is included approximately $63,533.03 yet to be refunded. By fiscal years the losses, counting the refunds made so far, have been:

Fiscal year.	Difference in tolls actually collected.	Refunds made later for excess collections during year.	Total.
1914			
1915		$165,457.71	$165,457.71
1916	$390,714.05	22,110.46	412,824.51
1917	1,034,001.88	17,382.47	1,051,384.35
1918	1,083,111.69	8,701.09	1,091,812.78
1919	867,526.48	1,299.39	868,825.87
1920	1,445,117.50	10,948.49	1,456,065.99
Total	$4,820,471.60	$225,899.61	$5,046,371.21

Adding to $5,046,371.21 the sum of $63,533.03 due to be refunded to ships' operators, disbursement of which had not been effected to the close of the fiscal year 1920, gives $5,109,904.24 as the aggregate loss in Canal revenues to June 30, 1920, as the result of the change of basis from the original Canal rules.

The accompanying chart (page 138) shows graphically the relation, by fiscal years, between the expenses of maintenance and operation of the Canal, and the revenues derived; and shows also the relation of the additional revenue which would have been derived under the application of the Canal rules.

The Fuel Situation.

THE PANAMA CANAL,
DEPARTMENT OF OPERATION AND MAINTENANCE.
BALBOA HEIGHTS, C. Z., October 20, 1920.

To all steamship agents—With reference to my circular of October 2, 1920, you are informed that the coal situation has eased sufficiently to make it probable that The Panama Canal will be able to continue the former coaling arrangements, including the coaling of vessels for the round trip on the west coast of South America.

The above statement is not to be taken as indicating that the coal supply in sight is anywhere nearly adequate for all purposes and it devolves upon all agents to cut their coal requirements to the lowest limit compatible with continued service. Loyal cooperation in this matter is expected.

E. P. JESSOP,
Marine Superintendent.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending October 23, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Allianca	Panama Railroad Steamship Line		October 17		328
Caribbean	Panama Railroad Cattle Industry		October 17		½
Toloa	United Fruit Co	October 17	October 17	90	(1)
Palena	Chilean Steamship Co		October 18		526
Leon XIII	Spanish Steamship Line		October 19		138
Halway	United States Shipping Board	October 17	October 19	5,714	(1)
Trinity	United States Government	October 17	October 22	7,579	(1)
Cubs	Pacific Mail Steamship Line	October 17	October 20	175	977
San Blas	United Fruit Co	October 18	October 18	320	(1)
Grangepark	Pacific Steam Navigation Co	October 18	October 19	31	211
Lake Capens	United Fruit Co	October 18	October 18	6	(1)
Colon	Panama Railroad Steamship Line		October 19		3,513
Peru	Pacific Steam Navigation Co		October 21		1,936
Fairhaven	Fairhaven Steamship Co	October 18	October 22	699	(1)
Gen. W. C. Gorgas	Panama Railroad Steamship Line	October 19		2,257	
Calamares	United Fruit Co	October 19	October 20	800	153
Cartago	United Fruit Co	October 19	October 21	961	136
Antillian	Leyland Line	October 19	October 22	1,241	413
Atenas	United Fruit Co	October 20	October 20	6	61
Jamaica	Pacific Steam Navigation Co	October 20		394	
Cauca	Pacific Steam Navigation Co	October 20		253½	
San Francisco	Johnson Steamship Line	October 20	October 20	151	(1)
Perou	French Steamship Line	October 21	October 23	43	260
Caribbean	Panama Railroad Cattle Industry	October 21		310	
Inca	Pacific Steam Navigation Co	October 22		239	
Chile	Pacific Steam Navigation Co	October 23		2,049	
Mantaro	Peruvian Line		October 23		2,442

[1] No cargo laded.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, October 23, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Eagle No. 10 [1]	9-25	19.22	18	6.10	18	13.21	20	17.30	American	United States Navy	200.0	26.0	12.0	Key West	San Francisco				
Eagle No. 58 [1]	9-25	15.03	18	6.10	18	13.25	20	17.30	American	United States Navy	200.0	26.0	12.0	Key West	San Francisco				
Eagle No. 6 [1]	4	18.28	18	6.10	18	13.29	20	17.30	American	United States Navy	200.0	26.0	12.0	Key West	San Francisco				
Eagle No. 38 [1]	9-25	17.00	18	6.10	18	13.31	20	17.30	American	United States Navy	200.0	26.0	12.0	Key West	San Francisco				
Coalinga	18	1.50	18	6.35	18	15.17	18	17.23	American	Union Oil Co	471.0	55.0	26.6	Tampico	Antofagasta	Crude oil	8,200	8,108	5,877
Palena	15	14.56	18	7.07	18	15.22	18	16.30	Chilean	South American Steamship Line	350.0	42.0	23.8	Cristobal	Valparaiso	General	527	3,666	2,577
Eagle No. 35 [1]	4	18.28	19	6.20	19	13.54	20	17.30	American	United States Navy	200.0	28.0	12.0	Kingston	San Francisco				
Eagle No. 12 [1]	9-25	15.04	19	6.20	19	13.59	20	17.30	American	United States Navy	200.0	26.0	12.0	Key West	San Francisco				
Eagle No. 47 [1]	9-25	15.07	19	6.35	19	14.07	20	17.30	American	United States Navy	200.0	26.0	12.0	Key West	San Francisco				
Eagle No. 34 [1]	9-25	15.05	19	6.20	19	14.03	20	17.30	American	United States Navy	200.0	26.0	12.0	Key West	San Francisco				
Eagle No. 8 [1]	9-25	19.22	19	6.35	19	14.10	20	17.30	American	United States Navy	200.0	26.0	12.0	Key West	San Francisco				
Eagle No. 7 [1]	4	18.28	19	6.35	19	14.23	20	17.30	American	United States Navy	200.0	28.0	12.0	Kingston	San Francisco				
Grangepark	18	6.35	19	6.22	19	13.07	19	14.00	British	The Denholm	400.4	52.3	22.6	New York	Valparaiso	General	4,500	5,710	4,017
Thomas [2]	16	7.09	19	10.24	19	17.48	19	18.35	American	United States Army	415.5	50.2	26.1	New York	San Francisco	Gov't stores	698		
Machigus [3]	19	6.00	19	6.15	19	14.10	19	14.50	Panaman	J. Alvarado	39.5	12.0	5.0	Colon	Panama	Ballast		23	14
McLeish, No. 220 [4]	8	15.52	20	6.12	20	12.50	20	13.35	American	United States Navy	314.0	31.0	11.0	Newport, R. I.	San Diego				
Bulmer No. 222 [4]	8	15.52	20	6.16	20	12.55	20	13.35	American	United States Navy	314.0	31.0	11.0	Newport, R. I.	San Diego				
Des Moines [5]	17	7.42	20	6.20	20	14.05	23	11.04	American	United States Navy	305.0	32.0	18.0	Vera Cruz	Valparaiso				
Orion [6]	16	20.55	20	6.22	20	14.00	20	15.30	American	United States Navy	514.0	65.0	28.6	Norfolk	San Diego	Coal and stores	8,550		
Wangaratta	19	15.12	20	6.38	20	15.15	20	16.05	British	British India Steam Nav. Co	450.0	58.0	29.0	New York	Brisbane	General	8,438	8,288	5,227
Yosemite	17	8.16	20	6.45	20	16.40	20	17.40	American	Pacific Steamship Co. (S. B.)	402.6	53.0	17.6	Boston	Seattle	General	1,900	6,570	4,921
Oriana	19	17.35	20	7.04	20	15.21	20	17.40	British	Pacific Steam Navigation Co	465.0	56.0	26.0	Liverpool	Coronel	General	3,238	8,620	5,345
Garfield	19	20.10	20	7.12	20	16.19	20	17.25	American	W. R. Grace & Co	299.0	45.0	22.0	New York	Callao	General	2,945	3,235	2,015
Myrmidon	20	6.30	20	9.10	20	17.10	20	18.24	British	Blue Funnel Line	390.0	49.0	16.0	Liverpool	San Francisco	General	1,521	4,941	3,257
Hawaiian	20	7.20	20	9.17	20	17.30	20	18.24	American	American-Hawaiian Line	406.0	51.0	20.0	New York	Los Angeles	General	3,317	6,039	4,180
Cuba	17	6.43	20	10.20	20	17.45	20	22.17	American	Pacific Mail Steamship Co	307.7	42.2	22.6	Baltimore	San Francisco	General	2,784	3,429	2,206
Pleiades	20	8.15	20	10.35	20	18.25	20	21.25	American	Luckenbach Steamship Line	331.0	47.0	20.6	New York	San Francisco	General	3,000	4,147	3,259
Cape Colony	20	10.22	20	12.25	20	20.10	21	10.29	British	British Africa Steamship Co	331.0	46.1	22.0	Norfolk	Auckland	Coal	3,954	3,493	2,186
Brant [7]	19	14.16	21	6.28	21	15.12	21	17.29	American	United States Navy	180.0	35.6		Cristobal	Salina Cruz				
China Arrow	21	4.00	21	6.48	21	14.10	21	16.05	American	Standard Transportation Co	468.0	63.0	26.0	Beaumont	Woosung	Oil	10,640	10,084	7,388
Maricopa	21	6.30	21	7.12	21	16.30	21	18.56	Norwegian	W. Wilhelmsen	425.0	57.0	27.6	Tampico	Tocopilla	Oil	9,500	6,996	5,118
St. Anne [8]	16	11.30	21	9.20	21	16.20	21	17.29	British	British Government	135.0	29.0	15.4	Southampton	Junin	Ballast		450	120
San Francisco [9]	20	18.20	21	12.39	21	19.57	22	16.08	Swedish	Johnson Steamship Line	360.8	51.9	19.3	Gothenburg	Talcahuano	General	3,672	5,298	4,019
Peru	10	18.00	21	13.10	21	21.20	22	.10	British	Pacific Steam Navigation Co	350.0	43.1	19.6	Cristobal	Valparaiso	General	1,936	4,095	2,655
Orcus	22	6.35	22	7.05	22	14.18	22	15.22	American	Wessel Duval & Co. (S. B.)	380.0	53.0	21.0	New York	Paita	General and coal	4,234	5,667	4,220
Fairhaven	18	22.17	22	9.37	22	15.24	22	19.05	American	Fairhaven Steamship Co	185.5	38.0	17.0	Cristobal	Puntarenas	Ballast		1,164	742
St. Enoder [8]	18	21.55	22	10.52	22	18.04	22	16.08	British	C. Rowbotham & Son	135.0	29.0	13.1	Southampton	Culeta Buena	Ballast		438	114

[1] Subchaser. [2] U. S. Army transport. [3] Launch. Destroyer. [5] Cruiser. [6] Collier. [7] Mine sweeper, with barge No. 30. [8] Tug. [9] Motor ship.

Dryden	22	11.45	22	12.07	22	19.09	22	20.30	American	Barber Steamship Line (S. B.)	434.0	57.0	25.6	New York	Shanghai	General	9,000	7,983	5,882
Bolton Castle	22	13.00	23	6.30	23	13.35	23	14.50	British	James Chambers & Co	400.0	50.0	27.0	New York	Yokohama	General	8,000	6,489	4,869
West Apaum	23	7.14	23	7.35	23	15.31	23	16.27	American	Atlantic Gulf & Pac. Corp. (S.B.)	409.0	54.0	22.0	Mobile	Los Angeles	General	6,000		
Mantaro	13	14.15	23	13.50	23	20.55	23	21.01	Peruvian	Peruvian Line	360.0	46.0	20.6	Cristobal	Callao	General	2,442	4,838	2,959

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Acme	16	16.35	17	6.39	17	13.30	17	13.30	American	Standard Oil Co	435.0	56.0	19.0	San Francisco	Beaumont	Ballast		7,405	5,166
Los Angeles	16	15.30	17	6.56	17	14.36	17	14.36	American	Union Oil Co	435.0	56.0	19.5	Antofagasta	Palo Blanca	Ballast		7,380	5,195
Halway	16	23.00	17	15.21	17	23.00	19	6.59	American	Struthers & Dixon (S. B.)	435.0	56.0	27.6	San Francisco	Cristobal[11]	Diesel oil	(15)	7,643	5,319
Hawarden	18	12.30	18	7.42	18	15.27	18	15.27	American	Williams Dimond & Co. (S. B.).	402.5	53.0	23.6	San Fransicco	Hull	(12)	6,405	6,525	4,746
Sciota [8]	13	15.45	18	9.45	18	15.20			American	United States Navy	155.0	30.0		Balboa	Cristobal				
Fairhaven	18	9.55	18	14.26	18	22.17	22	10.52	American	Fairhaven Steamship Co	185.0	38.0	18.6	San Francisco	Cristobal	Logs, hides	99	1,164	742
Olea	18	17.30	19	6.47	19	14.45	19	19.43	American	Williams Dimond & Co. (S. B.).	379.5	53.1	23.2	Portland	Hamburg	Flour	5,185		
Bellbuckle	19	1.00	19	8.27	19	17.25	19	22.45	American	U. S. & A. Line (S. B.)	395.5	55.0	27.1	Melbourne	New York	(13)	8,252	7,285	5,256
Brant [10]					19	14.16	21	6.28											
Eastern Soldier	19	12.35	19	14.00	19	21.24	20	5.45	American	General Steamship Corp. (S. B.).	425.0	53.8	25.0	Seattle	Philadelphia	Salmon, lumber.	[16]7,500	7,217	5,295
Scottish Monarch	19	21.30	20	7.36	20	16.25	20	19.20	British	Monarch Steamship Line	420.5	54.3	25.0	Taltal	United King.	Nitrates	8,000	6,321	4,546
Cauca	20	1.00	20	8.16	20	15.05	24	6.25	British	Pacific Steam Navigation Co	246.0	35.2	13.8	Guayaquil	Cristobal	Ecuador prod.	254	1,582	1,023
Jamaica	20	12.10	20	8.41	20	16.26	24	10.02	British	Pacific Steam Navigation Co	220.0	34.0	10.0	Tumaco	Cristobal	General	394	1,187	622
Shinbu Maru	20	9.20	20	9.36	20	17.47	21	6.30	Japanese	Katsuda Kisen Kabushiki Kaisha	400.0	48.2	25.0	Mogi	New York	General	6,259	5,316	3,824
Tonstad	20	9.40	20	10.36	20	18.55	21	4.00	Norwegian	Grefstad Rederi	376.2	48.0	23.1	Caleta Buena	Marseilles	Nitrates	5,890	4,550	3,339
Donald McKay	12	23.10	21	14.08	21	22.27	22	4.00	American	U. S. & A. Line (S. B.)	400.7	54.2	25.0	Auckland	New York	Ore, general	7,500	6,528	4,730
Steel Worker	21	6.50	21	14.53	21	23.00	21	23.00	American	United States Steel Products Co.	424.2	56.2	25.0	San Francisco	London	Barley, general	6,900	7,539	5,495
Relief [8]	17	9.59	22	14.11	22	20.15	24	11.52	American	Rolph Navigation and Coal Co	112.0	22.5	12.0	Antofagasta	Brunswick	Ballast		219	51
Santa Tecla	23	12.45	23	7.28	23	14.32	23	17.06	American	W. R. Grace & Co	298.6	40.0	22.9	Callao	New York	(14)	3,281	2,835	1,827
Kureha Maru	23	6.30	23	7.46	23	16.00	23	18.30	Japanese	Tatsuum Steamship Co. Ltd	400.0	53.0	25.3	Java	New York	Sugar	7,178		
Chile	23	6.40	23	10.40	23	18.04			British	Pacific Steam Navigation Co	350.3	43.1	19.4	Coronel	Cristobal	General	2,048	4,065	2,668

[10] Reported in last week's issue. [11] For orders. [12] Barley, ties, and general. [13] Chrome ore, menagerie, etc. [14] Sugar, vanadium, and ore. [15] 42,080 barrels. [16] Short tons.

PORT OF CRISTOBAL. Hours are expressed on the 21-hour basis and all hours greater than 12 are postmeridian.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Oct. 17	Trinity [17]	United States Navy	Baton Rouge.
Oct. 17	Toloa	United Fruit Co	Port Limon, C. R.
Oct. 18	Lake Capens	United States Shipping Board	Puerto Colombia.
Oct. 18	San Blas	United Fruit Co	Boston and Habana.
Oct. 19	Cartago	United Fruit Co	New Orleans.
Oct. 19	Antillian	Leyland Line	Liverpool.
Oct. 19	Calamares	United Fruit Co	New York via Habana.
Oct. 19	Gen. W. C. Gorgas	Panama Railroad Steamship Line	New York via Haiti.
Oct. 20	Atenas	United Fruit Co	New Orleans via wayports.
Oct. 21	Peron	French Steamship Line	St. Nazaire and wayports.
Oct. 22	Caribbean	Panama Railroad Cattle Industry	Cartagena.

[17] Oil tanker.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Oct. 17	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Oct. 17	Toloa	United Fruit Co	New York via Habana.
Oct. 18	Lake Capens	United States Shipping Board	Tela, Honduras.
Oct. 18	San Blas	United Fruit Co	Port Limon.
Oct. 19	Leon XIII	Spanish Steamship Line	Puerto Colombia.
Oct. 19	Colon	Panama Railroad Steamship Line	New York.
Oct. 20	Ulysses	Panama Railroad Steamship Line	Norfolk.
Oct. 20	Atenas	United Fruit Co	New Orleans.
Oct. 20	Calamares	United Fruit Co	Port Limon.
Oct. 21	Cartago	United Fruit Co	N. O., Bocas, Habana.
Oct. 22	Antillian	Leyland Line	Galveston.
Oct. 23	Peron	French Steamship Line	Puerto Colombia.
Oct. 22	Trinity [17]	United States Navy	Port Arthur, Tex.

PORT OF BALBOA.

Oct. 17	Eastern Temple	McCormack & McPherson (S. B.).	Seattle.	Oct. 20	Eastern Temple	McCormack & McPherson (S. B.).	Callao.
Oct. 18	Laura C. Hall [18]	Pacific Metals Corporation	Buenaventura.				
Oct. 23	Lady Sybil	International Petroleum Co	Talara.				

[18] Motor schooner. *Other than ships passing through the Canal.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending October 23, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Halway	United States Shipping Board	October 16	October 17	2,500	.....
Laura C. Hall	Pacific Metals Corporation, Ltd.	October 17	.....	3	83
Fairhaven	Fairhaven Steamship Co.	October 18	October 18	7	.....
Cauca	Pacific Steam Navigation Co.	October 20	October 20	6	.....
Jamaica	Pacific Steam Navigation Co.	October 20	October 20	2	.....
Cuba	Pacific Mail Steamship Co.	October 20	October 20	58	3
San Francisco	Johnson Line	October 21	October 21	5	25
Chile	Pacific Steam Navigation Co.	October 23	October 23	30	.....

Seagoing Barges Added to Coaling Equipment.

The placing of two 7,500-ton coal barges in the service of the Panama Railroad Steamship Line between Norfolk and Cristobal will increase considerably the ability of the line to furnish coal to the coaling plants at the Canal. One of the barges, the *Darien*, has been in service for several months, and the other, the *Mamei*, is now on her first voyage to the Isthmus. The barges are towed by the colliers *Achilles* and *Ulysses*.

7,500-TON SEAGOING COAL BARGE "MAMEI."

A photograph of the *Mamei* is shown on this page. Each of the barges is 352 feet in length, over all, 335 feet on the load waterline, by 52 feet beam, with a molded depth of 33 feet. The construction is a single-deck steel barge, with topside tanks through cargo holds, and continuous steel upper deck, with poop and forecastle decks. The hold is divided by 6 bulkheads, with forward peak tanks, 5 cargo holds, and after peak tank. The deck house aft is of steel and serves as pilot house, galley, etc. The officers and crew are quartered in the poop deck. The barge is equipped with sails, to take advantage of the winds in lightening the tow and to afford some means of making headway if the tow should break loose. The 4 masts carry fore staysail, foresail, mainsail, mizzen sail, jigger sail, and spanker. The steam equipment is for the stearing engine, capstan, windlass, towing machines, pumps, winches, heating system, and electric plant, including a radio outfit.

Each of the barges has a capacity of 7,500 tons of 2,240 pounds. The gross tonnage of each is 4,074 and the net tonnage, 3,760 tons. They were built at Mobile, Ala., by the Alabama Dry Dock and Shipbuilding Company, under a contract let by the Emergency Fleet Corporation under date of July 20, 1917.

One of the Canal colliers and one of the barges together can carry approximately 19,500 tons of coal; on their present voyage, the collier *Achilles* is bringing 12,110 tons and the barge *Mamei* has 7,405 tons. With the barge in tow the time of the voyage from Norfolk to Cristobal is about 8 days, as compared with 6 days without a tow. The time required for passage is increased approximately one-third, while the carrying capacity of the unit is increased approximately three-fifths; the net gain in ability to deliver is about one-fourth.

It is anticipated that, with the improvements which have been taking place in railway transportation to the seaboard in the United States, the Canal plants can count on receiving 50,000 or 55,000 tons of coal a month in the near future.

Steam Launch to Supplement Gasoline Launch Service.

The Navy Department has transferred to The Panama Canal the subchaser *S. P. 2232*, under conditions similar to those governing the transfer of the salvage steamer *Favorite*. The *S. P. 2232* was planned as a private steam yacht but was turned over to the Navy upon completion, in 1917. She is 110 feet in length, 20 feet beam, and has a draft of 6 feet. It is the intention of the Canal to make certain alterations which will fit the vessel for use in carrying parties of as many as 75 people; and she will probably be used, in part, for trips through parts of the Canal and to near-by points of interest, according to the patronage which may be expected from visitors to the Isthmus as well as residents. It is anticipated that the cost of operation of the *S. P. 2232*, a steam vessel operating with a small crew, will not be much in excess of the cost of operating the larger gasoline launches; and with larger parties the prorated cost will be smaller.

As this vessel was built originally as a yacht, the accommodations are exceptional for a vessel of her size. Aft of the engine room there are, at present, 3 double-berth staterooms and a social hall fitted with transoms, 2 large lockers, and a complete fitted bathroom. Forward of the engine room, the vessel is fitted with a fair-sized galley, crew's mess room, 2 double staterooms, and a comfortable crew's space. Forward of the pilot house, on a line with the main deck, is a comfortable day cabin.

Alterations are now being made in the accommodation arrangements to enlarge the social hall by combining the 2 forward staterooms, equipping them with transoms on 3 sides, and making additional provisions for the comfort of passengers. The deck cabin will be converted into a smoking room.

The clear deck space is large for this class of vessel and, with awnings spread, will be very comfortable under all favorable weather conditions.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended October 24:

Submarines *R–21* and *R–27*, periodical overhaul; steamship *Marne*, general repairs; dredge *No. 83*, general repairs; launch *Captain Wilhelm*, hull repairs and installation of new engine; steamship *Hodges*, general repairs; barge *No. 131*, general repairs; tug *Bohio*, general repairs; steamships *Donald McKay*, repairs to boiler, blower engine, and steering gear; *Diablo*, repairs to main turbine and air pump; *Havilah*, repairs to boiler and air pumps; tug *Cocoli*, rebush main engine throttle lever and rebuild brick work; steamship *Western Cross*, repairs to steering lever and

blower engine: U. S. S. *Des Moines*, light repairs; U. S. S. *Cleveland*, repairs to rudder stuffing box and refrigerating machine; U. S. S. Eagle *No. 12*, repairs to oil strainer.

The following vessels were at the Cristobal shops for repairs during the week ended October 25:

Steamship *General Gorgas*, miscellaneous repairs and painting to engine, deck, and steward departments; tug supply *No. 1*, clean and paint hull; repair pump, clutch, etc.; tug *Relief*, clean and paint hull, minor repairs; steamships *Chile*, repair port and starboard boilers, dynamos, winch, etc.; *Manavi*, retube and weld crack in main condenser; renew tubes and weld boiler, etc.; D. A. D. G. *No. 76*, continued remetaling and refitting brasses, etc.; barges *Nos. 15*, *19*, *118*, *119*, *150*, and *151*, scale and paint; repair hull, etc.; U. S. S. *C-285*, overhaul main and auxiliary engines; U. S. S. *R-25*, repair and alter engine foundation, etc.; launch *Pequeni*, overhaul both engines; steamships *Acajutla*, *Caribbean*, *Jamaica*, U. S. D. B. L. *No. 53*, minor repairs.

Transfer Charges on Freight Shipments to Panama City.

Under Supplement No. 2 to Freight Classification and Tariff No. 31 of the Panama Railroad Steamship Line, publishing class and commodity rates from New York to Panama City, Item 27 (which amends Item 25), establishes the following:

ISTHMUS TRANSFER CHARGES.

In addition to rates covered by Tariff No. 31, as amended, all shipments for Panama City, R. P., will be subject to transfer rate of $1 per bill of lading ton, and all shipments of specie or any other commodity on which freight is charged on an ad valorem basis will be subject to an additional charge of 1/32 of 1 per cent, as per Panama Canal Tariff No. 4, Item 18.

Observation of Meteorological Conditions During Attempted Aeroplane Flight to Jamaica.

The 3 aeroplanes which started to fly from Cristobal to Jamaica on October 6 were compelled to turn back by a storm over the Caribbean to the south of the island. This storm was along the southern edge of the hurricane belt, although the mean path of recorded hurricanes skirts the northern coasts of Santo Domingo and Cuba, in a parabolic course which extends from the Lesser Antilles toward the United States. Observations on the Caribbean storms are of interest to shipping,[1] and with this in mind THE PANAMA CANAL RECORD requested Mr. Samuel Gottlich, observer in the Section of Meteorology and Hydrography of The Panama Canal, who assisted in the observation of weather conditions over the course of the flight, to contribute an article on this phase. His paper follows:

The recent attempt to fly to Jamaica may be viewed from many angles. Among these may be considered the gas consumption in the tropics, the stability of the motor in warm climates, etc. But one angle that parallels any of the above in importance is the meteorological phase of the flight.

The value of authentic meteorological observations and forecasts has long been recognized. The giant dirigible *R-34* carried a meteorologist as part of the ship's complement, while meteorologists were stationed at Rockaway, N. Y., Newfoundland, the Azores, and Portugal during the *N. C.* flight.

Briefly, the meteorological plans for the Jamaican flight were as follows: Hourly wind observations were to be made and wirelessed by all ships, which were stationed at intervals of 60 miles. The Eagle *No. 4* with the naval aerological officer aboard, and the Navy tug *Sciota*, on which ship I was stationed, were to make periodic detailed observations and forecasts and radio them to Colon. The above 2 ships also were to "listen in" on Swan Island and obtain the West Indian meteorological observations with which to make synoptic charts. The Naval Aerological Office was to take periodic upper air observations before and during the flight.

[1] An article on "West Indian Hurricanes," with a chart, was published in THE PANAMA CANAL RECORD of September 1, 1915 (issue No. 2 of Volume IX).

These 2 ships left to take their stations, Sunday evening, October 3.

Early in the morning of October 5 the *Sciota* assumed her position as station No. 5, about 300 miles from Colon.

The wind was fresh and increasing, but to all indications it was a trade wind. By 8 a. m. it was blowing approximately 35 miles per hour and extremely gusty. A radio message was received from the Eagle *No. 4* to the effect that the same conditions existed in their vicinity, 60 miles south of Kingston. An effort was made to establish communication with Colon in order to inform the Naval Air Station of these conditions, but this failed. Incidentally, the communication difficulty was existant throughout the flight.

The wind held stationary until noon and then a diminution in velocity was observed. By 3 p. m. the wind had diminished to 12 miles per hour from the northeast. The barometer was normal but fluctuating slightly. There were about three-tenths cumulus clouds in the sky.

By 4 p. m. a perceptible inclination toward a backing wind direction was observed. On the eastern horizon a faint cirroform cloud bank was observed. The upper air had an easterly tendency. This was indicated by a few alto cumulus clouds with an easterly direction. These indications prompted me to send the following message: "Northeast 18. Cirrus clouds in sky presage possibility of bad weather." However, owing to poor communication, this message failed to arrive at its destination.

From 5 p. m. the wind gradually increased in velocity and at midnight it was blowing at 25 miles per hour with gusts probably reaching 40 miles. An attempt was made to send the following message: "12 midnight. Northeast 25, gusty, intermittent rain. Unfavorable for a start. Communication extremely difficult, almost impossible to send messages." The radio operator tried continuously to send this message but it was not until 6.30 a. m. of the 6th that he relayed it through the Eagle *No. 58*, which was 60 miles astern of us.

The planes left Colon before the message was received, but it was broadcasted and the 2 naval planes picked it up after they had been out several hours. Realizing the futility of continuing the flight, their commander decided to return to Colon.

By 11 a. m. on the 6th the rain was falling in torrents and the wind was blowing at a terrific rate. Indeed, no plane could have weathered these elements. At times the visibility was not more than 200 yards, owing to the copious rainfall. The sea was running very high and we tossed about like a chip.

This weather continued until about 3.30 p. m., when a slackening up of both rain and wind was observed. The wind veered around to the southeast and patches of blue sky appeared.

At 5.30 a. m. of the 7th we were informed that all planes had returned and to proceed to Colon immediately.

A short time after the flight I was requested to explain in a few words how the path of this disturbance was determined.

As in the case of the cirrus bands or feathery cloud bank observed on the eastern horizon on the 5th, it is generally known that cirrus clouds, known as mares' tails among seafarers, precede a low pressure area. In these latitudes depressions drift from east to west with the general wind movement. The apparent center of the depression was located by observing the approximate center of the cirrus bands and its apparent direction of drift was deduced by noting the shifts of the wind.

Enlarging Industrial Ward of Corozal Hospital.

The industrial ward of Corozal Hospital in which those patients who are capable of the work are given instruction in manual arts or allowed to work at crafts in which they are previously experienced, is being enlarged. The patients make a variety of useful articles, which are sold through the commissary store or at the hospital.

Information to Be Furnished Grievance Board.

The Governor has directed that the following paragraph be added to and made a part of his letter dated July 13, 1920, establishing the Grievance Board for investigation and recommendation on complaints of employees concerning working conditions:

"The Board or its subcommittee will be furnished by any employee of The Panama Canal or Panama Railroad Company, orally or in writing, any information necessary in connection with matters within its purview, upon request."

The letter of July 13 was published in THE PANAMA CANAL RECORD of July 14, 1920, page 705 of Volume XIII.

Train Service, November 3.

November 3, being a legal holiday, the Panama Railroad will operate Saturday's schedule on Tuesday, November 2, and Sunday's schedule on Wednesday, November 3, on the main line and on the Las Cascadas branch. Local freights will not run on November 3.

Increased Accommodations at the Hotel Aspinwall.

Recent renovation completed in the Hotel Aspinwall at Taboga has increased the rooming capacity of the hotel approximately one-third. This has made the accommodations sufficient to handle the ordinary patronage without crowding.

Baggage of Patrons Returning from Hotel Aspinwall.

The Panama Railroad invites attention to the following with reference to the baggage of patrons of the Hotel Aspinwall returning to points on the line of the railroad:

Passengers with baggage leaving Taboga Island for points on the Panama Railroad who desire to have baggage arrive at their destination on the same date should leave Taboga in time to make connection with train No. 8, scheduled to leave Panama at 5 p. m. Baggage failing to connect with train No. 8 will remain over and be forwarded on train No. 4, 7.10 a. m., from Panama, the following morning. No baggage is handled on train No. 10, leaving Panama at 11.30 p. m. on Saturdays or on train No. 12, leaving Panama at 9.35 p. m. on Sundays. Baggage room is closed at 7.15 p. m. and no baggage will be received at Panama Station after that time.

Passengers who fail to connect with train No. 8 and who do not arrive at Panama before 7.15 p. m., should arrange to bring their baggage to Balboa Heights Station, where watchman at that point will place same in the baggage room until the following morning.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights (telephone 286):

Clerk, with knowledge of ship measurements (male and female); $1,600 a year; form 1312; age, 25 years and over; a vacancy exists in the Bureau of Navigation, Department of Commerce, Washington, D. C.; November 17, 1920.

Deputy shipping commissioner (male and female); $960 a year and over; form 1312; age, 18 years and over; vacancies exist at New York, N. Y., Baltimore, Md., Newport News, and Norfolk, Va., New Orleans, La., and San Francisco, Cal.; November 3, and December 15, 1920.

Automobile mechanic, 56 cents an hour; automobile mechanic's helper, 44 cents an hour (male and female); form 1800; age, 18 years and over; vacancies exist in the Bureau of Mines, Interior Department, Washington, D. C.; November 16, 1920.[1]

Glassworker (male and female); $1,200 to $1,680 a year; form 304; age, 25 years and over; vacancies exist in the Bureau of Standards, Washington, D. C.; November 16, 1920.[1]

Telephone auditor (male and female); $2,000 to $2,400 a year; form 1312; age, 23 years and over; vacancies exist in the office of the Chief Signal Officer, War Department, Washington, D. C.; November 16, 1920.[1]

Investigator in poultry and egg handling (male and female); $1,620 to $2,400 a year; form 1312; age, under 45 years; vacancies exist in the Bureau of Chemistry, Department of Agriculture, for service in the field; November 17, 1920.

Graphotype operator (male and female); $660 to $1,200 a year; form 304; age, 18 years and over; vacancies exist in the Bureau of War Risk Insurance, Washington, D. C.; November 17, 1920.

Copperplate map engraver (male and female); $1,000 a year; form 1800; age, 18 years and over; 2 vacancies exist in the Coast and Geodetic Survey; date announced later.

[1]Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Official Circulars.

Amendment to Departmental Tariff "A."

THE PANAMA CANAL,
PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., September 30, 1920.

To all concerned—The following amendment is made to Departmental Tariff "A"—Schedule of Rates for Supplies and Services Furnished to Departments and Divisions of The Panama Canal, Panama Railroad, other departments of the United States Government, employees, and those entitled to employees' rates, except where otherwise specified:

CLASS VI. HOTELS, RESTAURANTS, AND MESSES.

Item 6.

FLOATING EQUIPMENT.

Effective October 1, 1920.

Gold employees:	
Per meal	$0.50
Per day (three meals)	1.50
Silver employees:	
Per meal	.17
Per day (three meals)	.50

CHESTER HARDING,
Governor, The Panama Canal.
President, Panama Railroad Company.

Applications for Assignment and Transfer of Quarters.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 20, 1920.

CIRCULAR No. 627-28:

Paragraphs 7 and 11 of Circular No. 627-24, dated June 3, 1919, are amended to read as follows:

"7. An applicant on the waiting list for family quarters, when he becomes eligible for assignment, will be given an opportunity to refuse 3 distinct tenders. If he does not accept the third his application will be canceled and he will not be allowed to file a new application for quarters for a period of 10 days from date of last tender. Employees on leave will not be assigned until their return to the Isthmus, unless they advise the district quartermaster that the head of their department will accept quarters for them."

"11. Applications for transfer must be submitted in the same manner as new applications and will be considered in the same order, excepting that transfers will not be allowed employees under subsections 2 and 3 of the foregoing paragraph until all employees in subsection 1 have been assigned. Changes may be made in kind of quarters requested on original application by writing to the district quartermaster. An applicant for transfer will be given an opportunity to refuse 2 separate and distinct tenders. If he does not accept the second tender his application will be canceled and he will not be allowed to file a new application for a period of 30 days. Employees on leave will not be offered a transfer until they return, unless they advise the district quartermaster that the head of their department will accept quarters for them."

CHESTER HARDING,
Governor.

Acting Municipal Engineer.

THE PANAMA CANAL,
EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 21, 1920.

To all concerned—Effective October 25, 1920, Mr. George W. Green will be in charge of the work of the Municipal Engineering Division as Acting Municipal Engineer during the absence of Mr. D. E. Wright, Municipal Engineer, on leave.

CHESTER HARDING,
Governor.

Appointment.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 22, 1920.

CIRCULAR No. 661-90:

Effective this date, Walter F. Van Dame is appointed Counsel for the Panama Railroad Company on the Isthmus, and Land Agent, for The Panama Canal.

CHESTER HARDING,
Governor, The Panama Canal.
President, Panama Railroad Company.

District Dentists.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., November 1, 1920.

CIRCULAR No. 622-3 (superseding circular No. 622):

1. Dentists may be employed without salary, but will be privileged to charge certain fees for services, and will be entitled to privileges accorded employees on the gold roll. During the first 2 years of service they shall be entitled to privileges and allowances of employees on the gold roll drawing $2,400 a year, and after 2 years' satisfactory service may be assigned to the same class of quarters to which an employee drawing $3,000 per year is entitled. Office room and office furniture will be supplied by The Panama Canal.

2. In return for these allowances they shall be subject to all the rules and regulations of The Panama Canal, and shall do dental work for employees of The Panama Canal, and their families, and for employees of contractors for The Panama Canal, and members of their families, at rates to be fixed by the Chief Health Officer. These rates shall be posted conspicuously in each office, as follows:

Professional visits at home of patient	$2.00
Devitalizing pulp and removing same	2.00
Treatment of alveolar abscess, each treatment	.50
Treatment of root canals and teeth, each treatment	.50
Filling roots of teeth	1.00 to 2.00
Fillings of porcelain	3.00 to 6.00
Fillings of gold	2.00 to 8.00
Fillings, gold inlays	5.00 to 15.00
Fillings, amalgam	1.00 to 3.00
Fillings, cement	1.00
Fillings, gutta percha	1.00
Cleaning teeth, removing of calculus, treatment of pyorrhea and diseases of the oral cavity generally, each treatment	.50 to 2.00
Cleaning of children's teeth	1.00
Extraction of tooth	.50
Extraction of impacted tooth	5.00
Extraction of children's teeth, each	.50
Anesthesia, local	.50 extra
Gas	3.00 extra
Post extractions, treatment	.50
Full artificial upper or lower dentures (or plate):	
Vulcanite, each	20.00 to 30.00
Gold, each	75.00
Aluminum, each	30.00 to 40.00
Partial dentures	20.00 to 30.00
Crown work, incisors and bicuspids, each crown	8.00 to 9.00
Crown work, molars, each crown	10.00
Bridge work (bridge attachments considered as teeth), incisors and bicuspids, per tooth	8.00 to 9.00
Bridge work (bridge attachments considered as teeth), molars, per tooth	10.00
Porcelain crowns with cast base	10.00
Removing crown	1.00
Removing bridge or more than one crown abutment	2.00
Examination (routine), for estimate	No charge.

CHESTER HARDING,
Governor.

Reduced Steamship Transportation for Relatives of Employees.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 22, 1920.

CIRCULAR No. 610-3:

1. The United States Shipping Board has ruled that the rate of $45 heretofore granted to relatives of employees, is illegal and that it is necessary to annul it.

2. Effective at once, this rate is, therefore, discontinued.

3. Paragraph 14 of Circular No. 610, dated April 1, 1914, is amended accordingly.

CHESTER HARDING,
Governor.

Claims of Shortage in Pay, and Requests for Coupon Books.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 22, 1920.

To all concerned—The practice of handling by telephone or in person claims of shortage in pay and requests for coupon books consumes much valuable time and should be discontinued.

Claims relative to shortage in pay or overdeductions should be submitted by mail to the Bureau of Payrolls, Balboa Heights, on form No. 39, supply of which may be secured on requisition from the Printer at Mount Hope.

Coupon book requests must be handled in the regular way through the time books.

C. A. McILVAINE, *Executive Secretary.*

Name of Division Returning Empty Drums.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 20, 1920.

HEADS OF DEPARTMENTS AND DIVISIONS:

It is requested that tags be put on all empty drums returned to the storehouse hereafter, indicating the division which is to be credited with the drums and the name of the person originating each shipment. If tags are not available, the above information should be written on the drums with chalk.

Storekeepers have had considerable difficulty in arranging credit to proper divisions for drums returned, on account of lack of information as to the consignors.

R. K. MORRIS,
Chief Quartermaster.

Administrator's Sale.

The Administrator of Estates, room 301, Administration Building, Balboa Heights, offers for sale, for account of the estate of Edwin L. Larsen, deceased American employee of The Panama Canal, a new 2-piece suit of dark gray tweed (commissary goods) of the following measurements: Coat, 41; trousers, length and waist, both 33½. The clothes may be examined and tried on any weekday between 8 a. m. and 8 p. m. and on Sundays between 8 a. m. and noon, at the tailor shop of Robert C. Smith, No. 1 Calle I, Panama, opposite Smallwood's garage.

The sale price of the suit is $35, and should be paid to the Administrator, who will then order the tailor to release the garments. Persons desiring to offer less than $35 may make written bids on the property, and send them to the Administrator in sealed envelopes, marked "Bid on suit of Edwin L. Larsen, deceased." Bids will be opened in the Administrator's office at 11 a. m., Monday, November 8, 1920, in case the clothes have not been previously sold at the $35 price. No deposit of money is required with bids, and the Administrator reserves the right to reject any or all bids.

Administrator's Sale.

The Administrator of Estates, room 301, Administration Building, Balboa Heights, will accept written bids up to noon, Friday, November 12, 1920, for the purchase of a portion of the personal effects belonging to the estate of Joseph M. Glover, a deceased American employee of The Panama Canal. The property to be sold consists of a considerable assortment of wearing apparel, personal and toilet articles, and a set of electrical worker's tools, all of which may be seen at the Administrator's office on business days. Detailed lists of the effects may be obtained from the Administrator, and will also be found posted on bulletin boards of Canal Zone post offices and clubhouses. Bids may embrace the entire collection of effects or be limited to individual articles. They should be submitted to the Administrator of Estates in sealed envelopes, marked "Bid on effects of Joseph M. Glover, deceased." No advance deposit of money is required with bids, and the right is reserved to reject any or all bids.

Cable Notice.

Western Union advises that the rate to Tahiti Island via British Pacific is now 10 cents per word more than via British Pacific as quoted in the tariff book.

COMMISSARY NOTE.

Notice of Change in Free Delivery Service.

Because of the marked and constant increase in inland and ocean freight rates, handling charges, labor costs, delivery expense, in fact practically all items entering into operating expenses, it is necessary immediately to increase the surcharge applied to groceries or to discontinue some form of service not absolutely essential, in order that the surcharge may be maintained at its present level.

Believing that the latter course will be more satisfactory to the great majority of commissary customers, one of the measures devised which, it is hoped, will assist in effecting the desired economy is the discontinuance, effective November 1, of the free delivery of articles other then bread and cold storage supplies, excepting on orders totaling $5 or more. For special delivery a charge of 25 cents will be made for one or two items, with 5 cents more for each additional item on the order, which represents, very closely, the actual expense incurred.

Ice, specially delivered, will be at the rate of 25 cents for each 100-pound piece or less, 40 cents for piece 110 pounds to 300 pounds and 40 cents for each additional 300-pound block.

A special delivery of ice cream in 5-gallon containers or less will be made for 25 cents, and a charge of 40 cents for each container of more than 5-gallon capacity.

It has also been decided to discontinue the peddle delivery of ice cream on Sunday afternoons after October 31.

THE PANAMA CANAL RECORD

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The Fuel Situation.

THE PANAMA CANAL, DEPARTMENT OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., October 27, 1920.

To all steamship agents—Cablegram from a coaling company advises that there are 14,000 tons of free coal at Habana. It is desired that, as far as possible, this coal be used by shipping, in order to conserve the supply on the Isthmus.

E. P. JESSOP,
Marine Superintendent.

CANAL WORK IN SEPTEMBER.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of September, 1920:

BALBOA HEIGHTS, C. Z., October 25, 1920.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of The Panama Canal for the month of September, 1920.

CANAL TRAFFIC.

The number of ocean-going commercial ships passing through the Canal during the month was 256, in addition to which there were 12 United States Government vessels, including 2 submarines, 1 mine sweeper, 6 merchant vessels with coal for the Navy, 2 Army transports, and 1 Navy supply ship. A detailed classification of the month's traffic is included with this report.

The Panama Canal net tonnage of the 256 commercial vessels aggregated 1,008,785 tons, 57,440 greater than for August. Their registered gross tonnage was 1,293,470, and their registered net tonnage 817,810. The total cargo carried was 1,009,557 tons of 2,240 pounds, 31,183 tons less than for the preceding month. Of this total, 2,130 tons were carried as deck cargo. The total number of vessels and craft of all kinds through the Canal for September was 274, as compared with 301 for last month. The total tolls earned were $1,010,166.38, as compared with $936,209.44 for August. The average number of toll-paying vessels per day was 8.73, and the average tolls per vessel, $3,855.60. Tolls collected amounted to $1,003,531.38.

The average tonnage, Panama Canal measurement, per vessel was 3,956; United States net equivalent, 3,265; registered gross, 5,072, and registered net, 3,207. The average cargo carried by the laden vessels was 4,853 tons.

The United States coastwise trade for September included 23 vessels with a total Panama Canal net tonnage of 90,247, and cargo of 110,231 tons. There were 12 vessels from the Atlantic to the Pacific with a total Panama Canal net tonnage of 44,651, and cargo of 50,450 tons; and from the Pacific to the Atlantic Coast 11 vessels with a total Panama Canal net tonnage of 45,596 and cargo of 59,781 tons.

PRINCIPAL COMMODITIES.

Bulk shipments of whole cargoes of the different principal commodities included in the September traffic were:

FROM ATLANTIC TO PACIFIC.

Commodity.	From—	To—	No. of cargoes.	Tons.	Total tons.
Fuel oil	Tampico	Pisagua	3	23,956	.....
Fuel oil	Tampico	Tocopilla	2	19,400	.....
Fuel oil	Tampico	Iquique	1	9,081	.....
Fuel oil	Tampico	Taltal	1	9,000	.....
Fuel oil	Tampico	Balboa	1	1,052	62,489
Fuel oil	Point Lobos	Pisagua	1	[1] 8,000	.....
Fuel oil	Point Lobos	Antofagasta	1	1,044	9,044
Fuel oil	New York	Newchwang, China	1	7,500	7,500
Total			11	79,033	79,033
Coal	Norfolk	Balboa	1	12,025	.....
Coal	Norfolk	Antofagasta	1	7,654	.....
Coal	Norfolk	Chile	1	5,707	.....
Coal	Norfolk	Iquique	1	2,882	28,268
Coal	Newport News	Iquique	2	10,240	10,240
Coal	Cardiff	Coquimbo	1	4,601	4,601
Coal	Philadelphia	Oakland	1	3,140	3,140
Coal	London	Portland	1	800	800
Total			9	47,049	47,049
Kerosene and gasoline	Sabine	Nagasaki	1	11,260	11,260
Kerosene and gasoline	Beaumont	Taku, China	1	10,481	10,481
Kerosene and gasoline	Port Arthur	Shanghai	1	7,000	7,000
Total			3	28,741	28,741
Structural steel	New York	W. coast U.S. and Canada	1	8,733	8,733
Structural steel	Philadelphia	Oakland	1	4,367	4,367
Total			2	13,100	13,100
Sulphur	Sabine	Portland	1	7,600	7,600
Sulphur	Galveston	British Columbia	1	2,200	2,200
Total			2	9,800	9,800
Crude naphtha	Tampico	San Francisco	1	10,000	10,000
Phosphates	Tampa	Kobe	1	6,613	6,613
Sugar	Jucaro, Cuba	Vancouver	1	2,867	2,867

[1] Excess fuel carried.

FROM PACIFIC TO ATLANTIC.

Nitrate	Antofagasta	New York	2	13,422	.....
Nitrate	Antofagasta	New Orleans	2	12,236	.....
Nitrate	Antofagasta	Wilmington	2	7,373	.....
Nitrate	Antofagasta	Europe	1	5,175	.....
Nitrate	Antofagasta	Philadelphia	1	4,450	42,656
Nitrate	Iquique	Dunkirk	1	6,902	.....
Nitrate	Iquique	St. Nazaire	1	6,369	.....
Nitrate	Iquique	Jacksonville	1	4,347	.....
Nitrate	Iquique	Baltimore	1	3,486	.....
Nitrate	Iquique	Norfolk	1	2,808	.....
Nitrate	Iquique	Matanzas, Cuba	1	2,799	26,711
Nitrate	Caleta Buena	Kingston	1	7,900	.....
Nitrate	Caleta Buena	Wilmington	1	4,213	.....
Nitrate	Caleta Buena	New York	1	3,150	15,263
Nitrate	Mejillones	New Orleans	1	11,285	.....
Nitrate	Mejillones	St. Thomas	1	4,000	15,285
Nitrate	Taltal	Alexandria	1	7,450	.....
Nitrate	Taltal	Savannah	1	3,334	10,784
Nitrate	Tocopilla	United States	1	6,496	.....
Nitrate	Tocopilla	Jacksonville	1	3,660	10,156
Nitrate	Caleta Colosa	Alexandria	1	9,530	9,530
Nitrate	Valparaiso	Bilbao, Spain	1	4,100	4,100
Nitrate	Guayacan	Brunswick	1	3,150	3,150
Nitrate	Chile	New Orleans	1	2,507	2,507
Total			27	140,142	140,142
Cold storage, food products	New Zealand	London	3	20,827	20,827
Cold storage, food products	Wellington	London	1	4,282	.....
Cold storage, food products	Wellington	New York	1	3,258	7,540
Cold storage, food products	Sydney	London	1	7,335	7,335
Cold storage, food products	Hobart	London	1	6,200	6,200
Cold storage, food products	Melbourne	New York	1	5,562	5,562
Cold storage, food products	Adelaide	Boston	1	5,504	5,504
Total			9	52,968	52,968

FROM PACIFIC TO ATLANTIC—continued.

Commodity.	From—	To—	No. of cargoes.	Tons.	Total tons.
Sugar	Philippine Islands	Philadelphia	1	9,800	9,800
Sugar	Philippine Islands	New York	1	8,300	8,300
Sugar	Philippine Islands, Japan.	N. Y. and New Orleans	1	7,380	7,380
Sugar	Japan	New York and Savannah.	1	6,069	6,069
Sugar	Samanco, Peru	New York	1	3,134	3,134
Sugar	Peru	New Orleans	1	1,527	1,527
Total			6	36,210	36,210
Wheat	Portland	Hull	1	9,500	.....
Wheat	Portland	Leith	1	6,104	.....
Wheat	Portland	Cape Town	1	5,323	20,927
Wheat	San Francisco	United Kingdom	1	6,373	6,373
Wheat	Vancouver	Genoa	1	5,250	5,250
Total			5	32,550	32,550
Flour	Tacoma	New York	2	15,419	.....
Flour	Tacoma	Christiania	1	3,000	18,419
Flour	Portland	Cape Town	1	1,000	1,000
Total			4	19,419	19,419
Lumber	Vancouver	New York	1	6,000	6,000
Lumber	San Francisco	Philadelphia	1	7,864	7,864
Lumber	Seattle	Cape Town	1	1,911	1,911
Total			3	15,775	15,775
Railroad ties	Vancouver	London	1	7,367	7,367
Railroad ties	Columbia River	Southampton	1	6,069	6,069
Total			2	13,436	13,436
Barley	San Francisco	Leith	1	7,149	7,149
Barley	Portland	Cork	1	6,140	6,140
Total			2	13,289	13,289
Canned pineapple	Hawaii	Boston	1	3,455	3,455
Canned pineapple	Hawaii	New York	1	2,406	2,406
Total			2	5,861	5,861
Lubricating oil	San Francisco	Philadelphia	1	9,410	9,410
Crude oil	Port San Luiz	New York	1	5,567	5,567
Chrome ore	Paagoumene, N. C.	Baltimore	1	7,305	7,305
Railroad equipment	Seattle and Vancouver	Sebastopol	1	6,350	6,350
Copper	Antofagasta	New York	1	4,075	4,075

LATIN-AMERICAN TRAFFIC.

Commercial vessels through the Canal en route to the west coast of Central and South America were classified as follows:

Nationality.	No. of ships.	Registered gross tonnage.	Registered net tonnage.	Panama Canal net tonnage.	Cargo.
					Tons.
American	23	111,281	69,368	84,885	86,964
British	16	61,860	37,213	45,996	32,655
Spanish	6	23,390	14,562	17,031	5,500
Norwegian	5	30,082	19,019	22,544	20,100
Chilean	4	19,426	9,141	12,269	5,507
French	2	11,372	7,103	8,302	900
Danish	2	9,075	5,717	8,449	13,271
Peruvian	2	8,049	4,187	5,356	2,991
Italian	1	5,371	2,933	3,530	900
German	1	4,630	2,861	3,640	Ballast
Japanese	1	3,857	2,364	3,033	4,740
Dutch	1	3,623	2,229	3,807	3,050
Costa Rican	1	265	194	185	Ballast
Panamanian	1	18	18	18	Ballast
Totals for September	66	292,299	177,179	219,045	176,578
Totals for August	75	259,052	161,784	193,894	196,087

Sixteen of the above vessels with an aggregate Panama Canal net tonnage of 44,993 were in ballast; 4 from United States ports, 10 from European ports, and 2 from Cristobal. Six vessels with a total Panama Canal net tonnage of 17,297 car-

rying 13,077 tons of cargo, were bound for Central American ports; the remainder for South American west coast ports.

The registry of the vessels, the kind and quantity of their cargo and its destination are shown below:

No. vessels	Registry.	Tons cargo.	Commodity.	Total commodity	Destined to—
11	United States	28,924	General	28,924	West coast of South America.
6	United States	42,081	Fuel oil	42,081	West coast of South America.
1	United States	2,882	Coal	2,882	West coast of South America.
2	United States		Ballast		West coast of South America.
12	British	19,054	General	19,054	West coast of South America.
1	British	9,000	Fuel oil	9,000	West coast of South America.
1	British	4,601	Coal	4,601	West coast of South America.
1	British		Ballast		West coast of South America.
1	Spanish	5,500	Coal	5,500	West coast of South America.
5	Spanish		Ballast		West coast of South America.
2	Norwegian	19,400	Fuel oil	19,400	West coast of South America.
1	Norwegian	700	General	700	West coast of South America.
2	Norwegian		Ballast		West coast of South America.
4	Chilean	5,507	General	5,507	West coast of South America.
2	Danish	13,271	Coal	13,271	West coast of South America.
2	Peruvian	2,991	General	2,991	West coast of South America.
1	French	900	General	900	West coast of South America.
1	French		Ballast		West coast of South America.
1	Japanese	4,740	Coal	4,740	West coast of South America.
1	Dutch	3,050	General	3,050	West coast of South America.
1	Italian	900	General	900	West coast of South America.
1	German		Ballast		West coast of South America.
1	United States	12,025	Coal	12,025	West coast of Central America.
1	United States	1,052	Fuel oil	1,052	West coast of Central America.
2	United States		Ballast		West coast of Central America.
1	Costa Rican		Ballast		West coast of Central America.
1	Panamanian		Ballast		West coast of Central America.
66		176,578		176,578	

The Latin-American traffic from the west coast of Central and South America for September is classified in the following tabulation:

Nationality.	No. of ships.	Registered gross tonnage.	Registered net tonnage.	Panama Canal net tonnage.	Cargo.
					Tons.
United States	30	121,491	76,667	90,623	104,467
British	25	104,874	63,845	79,648	71,078
Norwegian	3	16,894	11,652	13,089	14,534
Chilean	3	10,165	6,160	8,827	1,134
Italian	2	10,035	6,010	7,193	7,846
Danish	2	7,889	4,886	6,576	11,546
Dutch	2	6,428	3,961	6,719	9,285
Panamanian	2	362	362	362	Ballast
German	1	7,128	4,449	6,815	7,900
Peruvian	1	4,744	2,073	2,591	3,233
Spanish	1	3,361	2,174	2,467	4,000
Costa Rican	1	158	93	185	285
Totals, September	73	293,529	182,332	225,095	235,308
Totals, August	76	293,983	183,661	219,997	228,342

Thirteen of the above vessels were in ballast. This traffic included 7 oil tankers, 2 barges, 2 British tugs, 1 British naval supply ship, and 1 ship bound for Central America. Six of the 73 vessels, totaling 14,125 tons, Panama Canal net measurement, and carrying 5,852 tons of cargo were from Central American ports; the remaining 67 were from South American ports. This traffic is further classified in the following statement:

No. vessels	Registry.	Tons cargo.	Commodity.	Total commodity	Destined to—
13	United States	60,158	Nitrate		Atlantic ports of United States.
1	United States	2,799	Nitrate	62,957	Cuba.
5	United States	21,036	General		Atlantic ports of United States.
2	United States	1,432	General	22,468	Cristobal.
1	United States	6,307	Copper, nitrate	6,307	Atlantic ports of United States.
1	United States	5,567	Crude oil[1]	5,567	Atlantic ports of United States.
1	United States	4,034	Nitrate, sugar	4,034	Atlantic ports of United States.
1	United States	3,134	Sugar	3,134	Atlantic ports of United States.
4	United States		Ballast		Mexico.
1	United States		Ballast		Nicaragua.

[1] West coast of Mexico.

No. vessels	Registry.	Tons cargo.	Commodity.	Total commodity	Destined to—
7	British	2,592	General		Cristobal.
5	British	23,881	General		Europe.
3	British	10,254	General	36,727	Atlantic ports of United States.
2	British	16,980	Nitrate		Egypt.
3	British	17,371	Nitrate	34,351	Europe.
2	British		Ballast		Mexico.
1	British		Ballast		Cristobal.
1	British		Ballast		Jamaica.
1	British		Ballast		Trinidad.
2	Norwegian	14,534	Nitrate	14,534	Atlantic ports of United States
1	Norwegian		Ballast		Mexico.
3	Chilean	1,134	General	1,134	Cristobal.
1	Danish	6,496	Nitrate	6,496	Atlantic ports of United States
1	Danish	5,050	General	5,050	Hamburg, Germany.
1	Dutch	5,400	Nitrate, general	5,400	Europe.
1	Dutch	3,885	General	3,885	Havre.
2	Italian	7,846	General	7,846	Italy.
2	Panamanian		Ballast		Cristobal.
1	German	7,900	Nitrate	7,900	Jamaica.
1	Spanish	4,000	Nitrate	4,000	St. Thomas.
1	Peruvian	3,233	General	3,233	Cristobal.
1	Costa Rican	285	Logs, general	285	Cristobal.
73		235,308		235,308	

Forty-eight of the vessels passing through the Canal during September were under control of the United States Shipping Board, combining a total Panama Canal net tonnage of 184,299 and carrying 255,857 tons of cargo. Thirty-five were northbound with a Panama Canal net tonnage of 131,683 and cargo of 193,982 tons; 13 were southbound with a total Panama Canal net tonnage of 52,616 and cargo of 61,875 tons. In addition to the above, 2 vessels under the control of the Shipping Board, with a combined Panama Canal net tonnage of 9,574, and carrying 14,130 tons of fuel for the Army and Navy, transited the Canal southbound during the month.

Statements attached to this report show the distribution of the cargo through the Canal for September (see pages 166 and 167); the following tabulation gives the classification of the traffic according to the principal trade routes.

	Total vessels.			Vessels in ballast.	
	Vessels.	Panama Canal net tonnage.	Cargo.	Vessels.	Panama Canal net tonnage.
Atlantic to Pacific.					
East coast United States to west coast of South America	18	64,415	61,404	2	6,920
Europe to west coast of South America	17	60,300	21,065	8	24,987
East coast of United States to Far East	15	73,733	96,821		
Europe to west coast of United States	14	72,944	7,450	9	45,714
Cristobal to west coast of South America	14	21,408	10,551		
United States coastwise	12	44,651	50,450	1	438
Mexico to west coast of South America	9	46,100	70,481		
Europe to Australia and New Zealand	5	37,671	35,768		
East coast of United States to Australia and New Zealand	3	21,257	25,819		
East cost of United States to Balboa	3	10,569	12,025	2	3,561
Cristobal to west coast of United States	3	5,654	8,331		
Europe to west coast of Canada	2	11,065	20	1	4,999
East coast of United States to west coast of Canada	2	6,518	10,933		
Mexico to west coast of United States	1	6,254	10,000		
Mexico to Balboa, Canal Zone	1	6,525	1,052		
Canada to Australia and New Zealand	1	5,309	6,109		
East coast of South America to west coast of United States	1	4,034	6,503		
East coast of United States to Philippine Islands	1	3,812	6,568		
Cuba to west coast of Canada	1	1,927	2,867		
Cristobal to west coast of Central America	1	185		1	185
Cristobal to Balboa	1	18		1	18
Total, Atlantic to Pacific	125	504,349	444,217	25	86,822
Pacific to Atlantic.					
West coast of South America to east coast of United States	26	82,427	121,503		
West coast of South America to Cristobal	16	28,592	20,741	1	209
West coast of South America to Europe	13	58,859	63,433		
United States coastwise	11	45,596	59,781	1	4,573
Far East to east coast of United States	8	44,314	59,675		
West coast of United States to Europe	8	38,893	51,363		
Australia and New Zealand to Europe	6	41,556	41,327		
West coast of South America to Mexico	6	27,357		6	27,357
Australia and New Zealand to east coast of United States	5	33,299	28,096		
West coast of Canada to Europe	4	17,215	26,882		
West coast of United States to Cristobal	4	7,817	2,046		
Philippine Islands to east coast of United States	3	15,494	26,537		

	Total vessels.			Vessels in ballast.	
	Vessels.	Panama Canal net tonnage.	Cargo.	Vessels.	Panama Canal net tonnage.
Pacific to Atlantic—Continued.					
West coast of United States to Mexico	2	10,654	.....	2	10,654
West coast of South America to Egypt	2	8,905	16,980	.....	.....
Hawaiian Islands to east coast of United States	2	7,163	11,891	.....	.....
West coast of United States to South Africa	2	6,215	8,234	.....	.....
West coast of South America to West Indies (exclusive of Cuba and Porto Rico)	2	2,582	4,000	1	115
Balboa to Cristobal	2	362	.....	2	362
Balboa to Mexico	1	6,525	.....	1	6,525
West coast of Mexico to east coast of United States	1	5,324	5,537	.....	.....
Far East to Europe	1	5,318	8,200	.....	.....
West coast of Canada to east coast of United States	1	5,448	6,000	.....	.....
West coast of Mexico to Trinidad	1	1,108	.....	1	1,108
West coast of South America to Cuba	1	1,500	2,799	.....	.....
Balboa to east coast of Central America	1	1,729	.....	1	1,729
West coast of Central America to Cristobal	1	185	285	.....	.....
Total, Pacific to Atlantic	130	504,436	565,340	16	52,632

SERVICES TO CANAL SHIPPING.

Miscellaneous repairs were made at Cristobal and Balboa shops and dry docks on 121 vessels and craft during September; 69 at Cristobal and 52 at Balboa. Of these, 20 were dry-docked, 7 at Cristobal and 13 at Balboa. Bunker coal in the amount of 37,665 tons was supplied to 127 commercial vessels; 32,164 tons to 100 vessels at Cristobal, and 5,501 tons to 27 vessels at Balboa. Twenty-nine commercial vessels were furnished a total ot 40,847 barrels of fuel oil, 14 vessels with 20,160 barrels at Cristobal, and 15 vessels with 20,687 barrels at Balboa. There were 319 vessels supplied with 13,477,217 gallons of water; 190 at Cristobal with 10,479,467 gallons, and 129 at Balboa with 2,997,750 gallons. Sales of commissary supplies to commercial vessels other than those of the Panama Railroad Steamship Line aggregated $107,421.26, including $4,300.23 for laundry service; these sales were made to 175 vessels at Cristobal in the amount of $58,268.98, and to 113 vessels at Balboa in the amount of $49,152.28. Charges for tug service for vessels using the Canal and the terminal ports totaled $23,302.55, of which $14,637.80 was earned at Cristobal and $8,664.75 at Balboa.

STATEMENT OF OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Canal are shown in the following tabulation:

Item.	Cristobal.	Balboa.	Total.
Commercial ships passing through the Canal	125	[1]131	256
Net tonnage of above commercial vessels, Panama Canal measurement	504,349	504,436	1,008,785
United States equivalent net tonnage of commercial vessels	417,500	415,242	832,742
Registered gross tonnage of commercial vessels	647,033	646,437	1,293,470
Registered net tonnage of commercial vessels	404,946	412,864	817,810
Cargo through the Canal in commercial vessels, tons of 2,240 pounds	444,217	565,340	1,009,557
Deck load cargo included in above	160	1,970	2,130
Nationality of commercial ships through the Canal:			
British	36	[1]43	79
Chilean	4	3	7
Chinese	1	.....	1
Costa Rican	1	1	2
Danish	3	3	6
Dutch	3	2	5
French	3	.....	3
German	1	1	2
Italian	1	2	3
Japanese	8	4	12
Norwegian	5	4	9
Panamanian	1	2	3
Peruvian	2	1	3
Spanish	6	1	7
United States	50	64	114
Total	125	131	256
Panama Canal net tonnage of commercial vessels by nationality:			
British	173,257	182,471	355,728
Chilean	12,269	8,827	21,096
Chinese	4,432	.....	4,432

[1] Does not include 1 British cruiser with a displacement tonnage of 31,559.

Item.	Cristobal.	Balboa.	Total.
Panana Canal net tonnage of commercial vessels by nationality—Contd:			
Costa Rican	185	185	370
Danish	14,107	11,894	26,001
Dutch	15,941	6,719	22,660
French	10,270	.....	10,270
German	3,640	6,815	10,455
Italian	3,530	7,193	10,723
Japanese	35,048	21,149	56,197
Norwegian	22,544	16,975	39,519
Panamanian	18	362	380
Peruvian	5,356	2,951	8,307
Spanish	17,031	2,467	19,498
United States	186,721	236,428	423,149
Total	504,349	504,436	1,008,785
Total for preceding month	492,504	458,841	951,345
United States equivalent net tonnage of commercial ships by nationality:			
British	144,815	149,635	294,450
Chilean	7,825	5,071	12,896
Chinese	3,792	.....	3,792
Costa Rican	172	172	344
Danish	11,026	9,163	20,189
Dutch	13,142	4,909	18,051
French	9,174	.....	9,174
German	3,144	4,470	7,614
Italian	3,023	5,797	8,820
Japanese	30,746	18,016	48,762
Norwegian	19,078	14,747	33,825
Panamanian	18	362	380
Peruvian	2,495	1,506	4,001
Spanish	15,151	2,201	17,352
United States	153,899	199,193	353,092
Total	417,500	415,242	832,742
Total for preceding month	407,933	374,482	782,415
Registered gross tonnage of commercial vessels by nationality:			
British	217,001	232,917	449,918
Chilean	19,426	10,165	29,591
Chinese	6,026	.....	6,026
Costa Rican	265	158	423
Danish	15,994	14,526	30,520
Dutch	18,929	6,428	25,357
French	13,560	.....	13,560
German	4,630	7,128	11,758
Italian	5,371	10,035	15,406
Japanese	46,822	28,443	75,265
Norwegian	30,082	21,788	51,870
Panamanian	18	362	380
Peruvian	8,049	4,744	12,793
Spanish	23,390	3,361	26,751
United States	237,470	306,382	543,852
Total	647,033	646,437	1,293,470
Total for preceding month	622,073	586,398	1,208,471
Registered net tonnage of commercial vessels by nationality:			
British	136,760	147,155	283,915
Chilean	9,141	6,160	15,301
Chinese	3,871	.....	3,871
Costa Rican	194	93	287
Danish	10,940	9,122	20,062
Dutch	11,824	3,961	15,785
French	9,007	.....	9,007
German	2,861	4,449	7,310
Italian	2,933	6,010	8,943
Japanese	29,085	18,280	47,365
Norwegian	19,019	14,706	33,725
Panamanian	18	362	380
Peruvian	4,187	2,073	6,260
Spanish	14,562	2,174	16,736
United States	150,544	198,319	348,863
Total	404,946	412,864	817,810
Total for preceding month	396,312	374,008	770,320
Cargo carried by commercial vessels by nationality:			
British	130,724	177,217	307,941
Chilean	5,507	1,134	6,641
Chinese	4,500	.....	4,500
Costa Rican	.....	285	285

Item.	Cristobal.	Balboa.	Total.
Cargo carried by commercial vessels by nationality—Continued:			
Danish	13,871	19,746	33,617
Dutch	3,120	9,285	12,405
French	900	.....	900
German	.....	7,900	7,900
Italian	900	7,846	8,746
Japanese	38,832	25,772	64,604
Norwegian	20,100	17,534	37,634
Peruvian	2,991	3,233	6,224
Spanish	5,500	4,000	9,500
United States	217,272	291,388	508,660
Total	444,217	565,340	1,009,557
Total for preceding month	539,954	500,786	1,040,740
Tolls levied against commercial vessels by nationality:			
British	$171,100.96	$197,151.49	$368,252.45
Chilean	9,781.25	6,338.75	16,120.00
Chinese	4,740.00	.....	4,740.00
Costa Rican	133.20	215.00	348.20
Danish	13,782.50	11,453.75	25,236.25
Dutch	16,427.50	6,136.25	22,563.75
French	8,972.82	.....	8,972.82
German	2,620.89	5,587.50	8,208.30
Italian	3,778.75	7,246.25	11,025.00
Japanese	38,168.60	23,154.70	61,323.30
Norwegian	21,558.36	16,526.96	38,085.32
Panamanian	13.50	271.50	285.00
Peruvian	3,118.75	1,882.50	5,001.25
Spanish	13,267.77	2,751.25	16,019.02
United States	187,490.06	236,479.91	423,969.97
Total	$494,954.82	$515,195.81	$1,010,150.63
Total for preceding month	$493,418.85	$442,790.59	$936,209.44
Vessels passing through the Canal free of tolls:			
U. S. Navy submarines	2	.....	2
U. S. Navy colliers	5	1	6
U. S. Navy mine sweeper	1	.....	1
U. S. Navy supply ship	.....	1	1
U. S. Army transports	2	.....	2
Total	10	2	12
Total ocean-going vessels passing through the Canal	135	133	268
Launches and miscellaneous craft passing through the Canal	3	3	6
Net tonnage of above, Panama Canal measurement	11	10	21
Total vessels and craft passing through the Canal	138	136	274
Cargo carried by government vessels on which no tolls were charged	32,379	411	32,790
Commercial vessels through the Canal without cargo, but not in ballast	3	.....	3
Net tonnage of above, Panama Canal measurement	18,873	.....	18,873
Commercial vessels through the Canal in ballast	25	16	41
Net tonnage of above, Panama Canal measurement	86,822	52,632	139,454
Motor vessels through the Canal	5	4	9
Net tonnage of above, Panama Canal measurement	9,614	9,458	19,072
Sailing vessels through the Canal	3	.....	3
Net tonnage of above, Panama Canal measurement	5,582	.....	5,582
Tolls levied on laden vessels through the Canal	$425,254.10	$462,420.20	$887,674.30
Tolls levied on vessels in ballast through the Canal	69,687.22	36,996.11	106,683.33
Tolls levied on displacement tonnage through the Canal	.....	15,779.50	15,779.50
Tolls levied on ocean-going yachts through the Canal	13.50	.....	13.50
Tolls levied on launches and miscellaneous craft through the Canal	8.25	7.50	15.75
Total tolls levied	$494,963.07	$515,203.31	$1,010,166.38
Total vessels entering port, including Canal transit	319	268	587
Total vessels clearing port, including Canal transit	317	275	592
Total vessels entering and clearing	636	543	1,179
Registered gross tonnage of vessels entering port	1,643,730	1,363,803	3,007,533
Registered gross tonnage of vessels clearing port	1,636,367	1,382,038	3,018,405
Total for vessels entering and clearing	3,280,097	2,745,841	6,025,938
Registered net tonnage of vessels entering port	1,116,638	883,849	2,000,487
Registered net tonnage of vessels clearing port	1,112,282	897,650	2,009,932
Total for vessels entering and clearing	2,228,920	1,781,499	4,010,419
Vessels entering port but not passing through the Canal	60	8	68
Gross tonnage of vessels entering port but not passing through the Canal	284,079	20,835	304,914
Net tonnage of above	171,977	14,834	186,811

Item.	Cristobal.	Balboa.	Total.
Vessels clearing port but not passing through the Canal	61	6	67
Gross tonnage of above	298,075	15,469	313,544
Net tonnage of above	183,380	11,123	194,503
Vessels passing through the Canal and handling passengers or cargo at port:			
Entering	43	45	88
Gross tonnage of above	175,271	177,988	353,259
Net tonnage of above	104,826	113,430	218,256
Vessels passing through the Canal and handling passengers or cargo at port:			
Clearing	47	47	94
Gross tonnage of above	187,421	181,297	368,718
Net tonnage of above	111,717	116,362	228,079
Transit cargo arriving ... tons	1,059,824	1,027,850	2,087,674
Transit cargo clearing ... tons	1,041,263	1,046,854	2,088,117
Total transit cargo ... tons	2,101,087	2,074,704	4,175,791
Cargo received for transshipment ... tons	23,073	.....	23,073
Cargo transshipped ... tons	36,689	133	36,822
Local cargo arriving ... tons	64,872	16,971	81,843
Local cargo shipped ... tons	3,046	2,936	5,982
Total local cargo ... tons	67,918	19,907	87,825
Total cargo arriving ... tons	1,147,769	1,044,821	2,192,590
Total cargo clearing ... tons	1,080,998	1,049,923	2,130,921
Cargo received by Receiving and Forwarding Agency, P. R. R. ... tons	50,520	2,164	52,684
Cargo dispatched by Receiving and Forwarding Agency, P. R. R. ... tons	39,919	3,633	43,552
Cargo rehandled by Receiving and Forwarding Agency, P. R. R. ... tons	3,295	1,226	4,521
Total cargo handled by Receiving and Forwarding Agency, P.R.R. tons	93,734	7,023	100,757
Cargo stevedored, included in above ... tons	39,157	3,625	42,782
Commercial vessels other than Panama Railroad supplied with bunker coal	100	27	127
Coal supplied above vessels ... tons	32,164	5,501	37,665
Panama Railroad vessels supplied with bunker coal	7	.....	7
Coal supplied above vessels ... tons	1,554	.....	1,554
U. S. Army vessels supplied with bunker coal	3	2	5
Coal supplied above vessels ... tons	131	25	156
Total vessels supplied with bunker coal from Panama Railroad deposits	110	29	139
Total coal furnished above vessels ... tons	33,849	5,526	39,375
Coal supplied Panama Railroad departments ... tons	805	50	855
Coal supplied U. S. Army, excepting vessels ... tons	62	.....	62
Coal supplied The Panama Canal ... tons	1,629	445	2,074
Coal supplied individuals and companies ... tons	516	.....	516
Total coal furnished from Panama Canal deposits ... tons	36,861	6,021	42,882
Coal received during September ... tons	12,036	12,016	24,052
Coal on hand October 1, 1920 ... tons	12,568	12,030	24,598
Coal on hand September 1, 1920 ... tons	37,393	6,035	43,428
Coal—U. S. Navy Account.			
Coal furnished U. S. Navy, including vessels ... tons	1,773	1,937	3,710
Coal on hand October 1, 1920 ... tons	60,188	17,928	78,116
Coal on hand September 1, 1920 ... tons	61,961	19,865	81,826
Commercial vessels other than Panama Railroad supplied with fuel oil from Panama Canal tanks	14	15	29
Fuel oil sold to above vessels ... bbls	20,160	20,687	40,847
Fuel oil issued to U. S. Navy ... bbls	629	.....	629
Fuel oil issued to U. S. Army ... bbls	.....	4,211	4,211
Fuel oil issued to Canal departments ... bbls	7,249	21,597	28,846
Fuel oil issued to individuals and companies ... bbls	3,265	4,854	8,119
Total fuel oil furnished from Panama Canal tanks ... bbls	31,303	51,349	82,652
Fuel oil received during September ... bbls	138,632	52,936	191,568
Fuel oil on hand October 1, 1920 ... bbls	123,272	88,966	212,238
Fuel oil on hand September 1, 1920 ... bbls	15,944	87,379	103,323
Other oil pumped for individuals and companies ... bbls	288,041	151,033	439,074
Diesel oil on hand October 1, 1920 ... bbls	.....	1,110	1,110
Vessels supplied with water	190	129	319
Water sold to above vessels ... gallons	10,479,467	2,997,750	13,477,217
Vessels on which miscellaneous repairs were made	69	52	121
Vessels dry-docked	7	13	20
Commercial vessels furnished commissary supplies	175	113	288
Panama Railroad vessels furnished commissary supplies	11	2	13
Other U. S. Government vessels furnished commissary supplies	25	12	37
Commissary sales to commercial vessels:			
Ice	$2,874.00	$1,329.30	$4,203 30
Wholesale groceries	8,295.20	13,372.26	21,667 46
Wholesale cold storage	41,484.92	31,098.94	72,583 86
Laundry	3,601.99	698.24	4,300.23
Miscellaneous	2,012.87	2,653.54	4,666.41
Total	$58,268.98	$49,152.28	$107,421 26

Item.	Cristobal.	Balboa.	Total.
Commissary sales to Panama Railroad vessels:			
Ice	$440.00	$49.20	$489.20
Wholesale groceries	2,534.90	194.69	2,729.59
Wholesale cold storage	9,288.79	1,074.36	10,363.15
Laundry	1,985.72	.....	1,985.72
Miscellaneous	957.32	2.80	960.12
Total	$15,206.73	$1,321.05	$16,527.78
Commissary sales to other government vessels:			
Ice	$245.18	$158.10	$403.28
Wholesale groceries	3,666.07	10,999.72	14,665.79
Whole cold storage	6,476.25	9,420 15	15,896.40
Laundry	789.50	.....	789.50
Miscellaneous	904.91	1,457.32	2,362.23
Total	$12,081.91	$22,035.29	$34,117.20
Total commissary sales to all vessels for September	$85,557.52	$72,508.62	$158,066.14
Total commissary sales to all vessels for preceding month	$90,579.18	$45,243.97	$135,823.15
Movement of passengers.			
Disembarking at Canal ports:			
First class—			
From Atlantic ports	1,605	4	1,609
From Pacific ports	210	277	487
Total, first class	1,815	281	2,096
Other than first class—			
From Atlantic ports	914	1	915
From Pacific ports	58	104	162
Total, other than first class	972	105	1,077
Total, disembarking at Canal ports	2,787	386	3,173
Embarking from Canal ports:			
First class—			
For Atlantic ports	1,681	.....	1,681
For Pacific ports	298	182	480
Total, first class	1,979	182	2,161
Other than first class—			
For Atlantic ports	1,808	.....	1,808
For Pacific ports	43	85	128
Total, other than first class	1,851	85	1,936
Total embarking from Canal ports	3,830	267	4,097
Remaining on board vessels:			
First class—			
Bound from Atlantic to Pacific ports	676	683	1,359
Bound from Pacific to Atlantic ports	544	779	1,323
Bound from Atlantic to Atlantic ports	457	.....	457
Total, first class	1,677	1,462	3,139
Other than first class—			
Bound from Atlantic to Pacific ports	1,769	1,874	3,643
Bound from Pacific to Atlantic ports	488	533	1,021
Bound from Atlantic to Atlantic ports	126	.....	126
Total other than first class	2,383	2,407	4,790
Total remaining on board	4,060	3,869	7,929
Total passengers arriving	6,847	4,255	11,102
Total passengers departing	7,890	4,136	12,026
Arrivals in excess of departures	.....	119	.....
Departures in excess of arrivals	1,043	.....	.....
Net excess of departures	.....	.....	924
Services to American seamen:			
Seamen shipped	254	168	422
Seamen paid off	129	134	264
Seamen deserted	15	10	25
Seamen deceased	1	.....	1
Seamen lodged and subsisted	29	12	41
Seamen repatriated	24	26	50

Item.	Cristobal.	Balboa.	Total.
Wages of American seamen:			
Total amount earned	$17,524.84	$15,319.61	$32,844.45
Deductions approved by Deputy Shipping Commissioner	5,184.17	3,610.25	8,794.42
Balance due seamen	$12,340.67	$11,709.36	$24,050.03
Paid to seamen	$8,157.62	$8,529.36	$16,686.98
Received on deposit for seamen	$4,183.05	$3,180.00	$7,363.05
Immigration deposits received	.....	$785.00	$785.00
Services to American vessels:			
Crews shipped	2	.....	2
Crews paid off	2	.....	2
Shipping articles written	2	.....	2
Marine notes of protest noted	16	7	23
Bills of health issued	172	139	311
Clearances issued	176	137	313

LOCK OPERATION.

Lockages of commercial vessels for September were as follows:

	Number of lockages.			Number of vessels.		
	North.	South.	Total.	North.	South.	Total.
Gatun	128	117	245	137	129	266
Pedro Miguel	125	125	250	131	130	261
Miraflores	125	124	249	131	131	262

All lockages, including Army and Navy vessels, those of the Panama Railroad and The Panama Canal, are shown in the following statement of lockages for September:

Lockages.	Gatun.	Pedro Miguel.	Miraflores.
Commercial	245	250	249
Noncommercial, Army and Navy	6	12	11
Noncommercial, Canal equipment	6	21	18
Totals	257	283	278
Vessels.			
Commercial	266	261	262
Noncommercial, Army and Navy	18	18	23
Noncommercial, Canal equipment	12	37	36
Totals	296	316	321

The total consumption of water for lockages during September was 2,932,180,000 cubic feet. The consumption by locks was as follows:

	Gatun.	Pedro Miguel.	Miraflores.
	Cubic feet.	*Cubic feet.*	*Cubic feet.*
Lockages	927,800,000	947,280,000	873,420,000
Leakage	20,000,000	78,230,000	59,000,000
Maintenance	.....	.....	26,450,000
Total	947,800,000	1,025,510,000	958,870,000

METEOROLOGY.

The rainfall for the month was above normal over the Pacific slope and along the Continental Divide and below normal over the Atlantic slope. The rainfall at Pedro Miguel, Rio Grande, Culebra, Camacho, and Empire was the highest on record at these stations for the month of September, while at Trinidad and Brazos Brook it was the lowest. At Colon the rainfall was the lowest since 1905. Totals in the Canal Zone and vicinity ranged from 5.35 inches at the Cucherbo station in the Trinidad Valley to 18.93 inches at Empire. The greatest amount of rainfall recorded on any one day was 4.93 inches at Balboa on the 21st.

The estimated September rainfall over the Gatun Lake watershed was 9.43 inches, compared with a 10-year mean of 11.63 inches. Over the Chagres River watershed above Alhajuela it was 11.18 inches, compared with a 19-year mean of 12.50 inches.

The discharge of the Chagres River at Alhajuela was 2,419 c. f. s., being 24 per cent below the 19-year September average of 3,189 c. f. s., and furnished 36 per cent of the Gatun Lake total yield. The maximum momentary discharge for the month was 18,450 c. f. s. at elevation 99.80 feet on the 22d, and the minimum discharge was 1,322 c. f. s. on the 19th. There were 2 rises of 5 feet or over at Alhajuela.

The Gatun Lake watershed total yield was 6,684 c. f. s., being 23 per cent below the 10-year September mean of 8,638 c. f. s. The maximum September yield since the existence of Gatun Lake was 11,946 c. f. s. in 1917, and the minimum total yield was 4,703 c. f. s. in 1911. The net yield for the month was 6,072 c. f. s. The maximum September net yield was 11,238 c. f. s. in 1917, and the minimum net yield was 4,620 c. f. s. in 1911. Gatun Lake varied from a maximum elevation of 86 feet to a minimum elevation of 85.48, averaged 85.60 feet, and ended at 86 feet midnight the 30th. There was an increase of storage of 1,870,000,000,000 cubic feet. The consumption of 1,703 c. f. s. at the hydroelectric plant was the heaviest on record.

The draft on the Lake for lockages and power was the heaviest on record during Canal operation, being 2,473 c. f. s., as compared with 2,444 c. f. s. for last month, and 2,042 c. f. s. for September, 1919. The ratio of water used for hydroelectric power and lockages was 2.21 to 1.

Miraflores Lake varied from a maximum elevation of 54.84 feet to a minimum elevation of 51.76 feet, averaged 53.26 feet, and ended at 54.04 feet midnight the 30th.

Three seismic tremors were recorded during the month. The first occurred on September 3, originating about 160 miles to the southwest of Balboa Heights. On the 20th there was a slight movement from a distant disturbance, distance and direction unknown. On the 24th, a third tremor took place, originating about 360 miles distant, and probably to the northwest of Balboa Heights. This was the most severe of the three, and sufficiently violent to be felt by a few people at Balboa Heights. Reports from Penonome, R. P., indicate that it was much more pronounced at that place.

ELECTRICAL DIVISION.

The gross output of the Gatun hydroelectric station for September was 6,129,100 KWH on a computed water consumption of 4,414,970,000 cubic feet. The gross output of the Miraflores steam plant was 19,490 KWH, with an oil consumption of 1,986.97 barrels. This plant was operated for stand-by purposes only.

The total gross output of both stations was 6,148,590 KWH. The total power distributed to consumers was 5,183,953 KWH. The total loss of power in plant auxiliaries, transmission, and transformation was 964,637 KWH, or 15.5 per cent of gross output.

There were 2 interruptions to transmission line service during the month; 1 occurring at 3.30 p. m. on the 16th on line No. 1, interrupting service for a period varying from 9 minutes at Gatun to 14 minutes at Gamboa; the other interruption occurred on line No. 2 at 12.04 p. m. on the 29th, interrupting service from a minimum of 3 minutes at Cristobal to a maximum of 15 minutes at Darien. The first interruption was caused by failure of suspension type insulator at Mile 33-9-A, and the second was due to lightning flashing over switch bushing at Darien substation.

There were 25 operations of the Gatun spillway during the month. The regular operations and maintenance was carried on at all substations without any extraordinary occurrences.

STATUS OF CONSTRUCTION WORK.

	Per cent completed.
E-503 Installation of 4 K-5 switches at Miraflores substation	[1] 62
E-519 Installation of two 1,000-ampere, K-12 switches at Cristobal substation	[1] 80
E-420 Installation of new 8,400 KVA transformer and 3 new tie-line equipments in Gatun substation	25
E-509 Installation of 2 complete feeder equipments at Balboa substation	[1] 95
E-400 Installation of three 400,000 cm. 3-conductor, lead-covered cables as tie lines between Gatun hydroelectric and substation	55

[1] Indicates no work done during month.

Construction work for the Army is separately reported.

SHOP, FOUNDRY, AND DRY DOCK WORK.

The work of rebuilding the *Marne* proceeded uninterruptedly. The bulk of the steel ordered in the United States for rebuilding the portion of the vessel damaged beyond repair arrived approximately on schedule time. So far the requirements of the progress sheet laid out at the beginning of the work for the different elements of the vessel have been met or anticipated and for the first 3 months the actual expenditures were within one-fourth of 1 per cent of the estimate. The upper deck of the ship has been relaid and partly riveted, and the midship shelter structure started. The shop overhaul of the machinery is 95 per cent complete and work of replacing machinery in the vessel begun. Rebuilding of the bow was completed and the vessel undocked on the 28th.

During the latter part of the month The Panama Canal collier *Achilles* damaged her bow while transiting the Canal. There was a question as to whether repairs could be handled on account of the dry dock not being available, but when the vessel discharged her cargo, it was found that the work could be done out of dock. The stem was removed and the bow plating removed on either side for a verical distance of about 30 feet. After the stem had been restored to shape, it was replaced and the bow rebuilt partly with the old plating and partly by replacing the damaged plates with new ones.

The tank steamer *Bradford* also damaged her bow below water while transiting the Canal. The shell plating and frames on the port side of the forepeak were badly distorted at about the 6-foot mark and there was a vertical tear in the plate about 4 feet in length and varying from 1 to 6 inches in width. The dry dock was occupied by the *Koyo Maru* and it was not desired to hold the vessel for permanent repairs so temporary repairs were resorted to. The cargo oil was removed from the forward part of the vessel to bring the bow up as high as possible. This brought only the upper portion of the damage above water. A caisson was then employed to get at the damaged portion. This was in the form of a box, made up of stout timbers, with the top and one side open. The edges at the open side were shaped to the form of the vessel from a pattern made by a diver and the edges then covered with a thick padding of canvas and oakum. This caisson was then maneuvered so as to bring the padded edges against the side of the vessel and the open top a foot or so above water. The water was then pumped out whereupon the surrounding water pressure kept the caisson jammed tightly in place. In this manner the water was removed from around the torn part of the hull and it was possible to work inside of the caisson and apply a plate directly over the break and for some distance either side so as to restore the strength of the hull. In addition a caisson or box was built inside the hull, over the damaged and leaky portion, filled with cement and well braced so that no water could leak into the ship.

Through a collision with a tug the side of the cruiser *Tacoma* was dented, her wood sheathing cut below the water line and a small leak started. A caisson was worked over the gash and a steel plate secured over the cut below water filled behind with cement to enable her to continue on her way until permanent repairs can be executed.

The *General H. F. Hodges*, one of the steamers of the Panama Railroad Steamship Line, was dry-docked at Balboa on September 28 and extensive repairing begun, which will probably require 2 months before completion.

The steamship *Bellepline*, upon which minor repairs were executed at Balboa, is a sister ship of the *Marne*, and afforded an opportunity to obtain knowledge of certain details desirable in connection with the work on the *Marne*.

The tug *Bohio* is being overhauled for conversion into an oil burner and partial rebuilding.

In addition to the above, miscellaneous repair work was performed on the following vessels at Balboa shops during September: *Halo*, *Cordelia*, *Willie A. Higgins*, *Talaralite*, *Caddo*, *Grelbank*, *Westboro*, *Sag Harbor*, *Steel Trader*, *Ansaldo San Giorgio IV*, *Benjamin Brewster*, *Juneau*, *Olockson*, *S. V. Harkness*, *San Juan*, *Lake Ellicott*, *Coalinga*, *Wallingford*, *Fluvanna*, *Steel Maker*, *Lake Elkwater*, *Adria*, *San Juan*, *West Cajoot*, *Parthia*, *Woudrichem*, *Maricopa*, *Mina Brea*, U. S. S. *Cleveland*, U. S. A. T. *Marica*, tug *Sciota*, U. S. subchaser *284*, U. S. submarines *R–21*, *R–22*, *R–27*, cable ship *Guardian*, motor ships *Astmahco III*, *Rosana*, and *Borgland*, barges *Nos. 102*, *121*, *141*, P. R. R. barge *No. 66*, and dredge *No. 83*.

Of the above the following were in dry dock at Balboa: U. S. submarines *R–22*, *R–21*, *R–27*, steamships *Koyo Maru*, *Bohio*, *Maricopa*, *Marne*, *General H. F. Hodges*, barges *Nos. 141*, *102*, *121*, P. R. R. barge *No. 66*, and dredge *No. 83*.

The heavy demand for compressed air at Balboa caused by the unusual amount of hull work has taxed the air compressor plant to the limit. It has been necessary to run the hammers in the forge shop by steam instead of compressed air and to operate regularly the steam air compressor hitherto held for a spare in case of a breakdown.

The more important ship repairs at the Cristobal plant included the following: a general overhaul of 3 main engines and auxiliary engine begun on the U. S. S. subchaser *No. 285*. A general overhaul of engines and auxiliaries, built and fitted cofferdam, repaired tail shaft and stern tube of the steamship *Bonham*. Renewed section of frame, plates, fenders, and angles at forward starboard of the dredge *Gamboa*. The crack in the boiler of the steamship *Elm Leaf* was electrically welded, the tubes in boilers scaled and renewed, and miscellaneous repairs made. The propeller of the tug *Porto Bello* was renewed; the propeller of the steamship *Agamemnon* was changed by tilting the ship; the feed and air pumps of the steamship *Nokatay* were repaired; the bow of the steamship *Cauca* was repaired, and the engine foundations of the U. S. S. *R–25* were repaired and altered.

In addition to the above the following vessels received miscellaneous repairs at the Cristobal shops: Steamships *Caddo, Balboa, Forse, Poe, Fields, Bath, Sanderling, William Isom, Essequibo, Mevanic, San Jose, Goldames, City of Para, Salvador, Stuyvesant, Elm Leaf, Bonham, Steel Trader, Urubamba, Toloa, Metapan, Lake Ellicott, Broad Arrow, San Juan, Friesland, Nokatay, Eastern Victor, Newport, Ancon, General Gorgas, Ulysses, St. Andre, Lake Copley, Peru, Guatemala, Cartago, Eurana, General Ernst, General Goethals, General Hodges, Jamaica, Quillota, Chepadoa, Manavi, Consuelo, Haiti, Adria, Panama, Colon, Allianca,* and *Cristobal*; U. S. S. Eagle *No. 4, 12, 32, 38*, U. S. subchaser *285*, U. S. submarine *R-25*, U. S. N. barge *No. 280*, U. S. S. *Rail*, U. S. S. *Falcon*, U. S. A. T. *Cantigny*, U. S. S. *Vulcan*; British government tugs *St. Mabyn* and *Jaunty*; schooners *Arabic* and *Admiral Wainwright*; tug *St. Ewe*, and launch *Corso*.

The following vessels were dry-docked at Cristobal during the month: Hulk *Arica*; tugs *Porto Bello* and *Einigkeit*; steamships *Cauca, Caribbean*; U. S. S. *Lap Wing*, and U. S. N. oil barge *No. 11*.

The output of the Mechanical Division in patterns, castings, and other foundry production for September, as compared with the preceding month, is shown below:

	September.			August.		
	Patterns.	Castings.	Pounds.	Patterns.	Castings.	Pounds.
Iron	23	1,029	49,724	37	1,362	95,064
Steel	31	94	13,915	11	.....	.....
Brass	22	1,800	15,201	25	1,205	23,756

The ordinary repair and maintenance work of the Mechanical Division for September included among other items the following:

Cars repaired	1,797
Locomotives and cranes repaired	1,168
Passenger coaches packed, cleaned, oiled, and inspected	3,621
Freight cars repacked	458
Locomotives hostled	1,629
Cranes hostled	219
Locomotives ridden	65
Locomotives inspected	96
Crews instructed in handling locomotives	23
Crews instructed in oil and fuel economy	33
Crews instructed in air brakes	16
Cranes, locomotive, inspected	28
Steam shovels inspected	5

BUILDING CONSTRUCTION.

The following statement represents the degree of completion, September 30, of the more important construction work by the Building Division:

	Per cent completed.
Colon stables:	
East half	100
West half—	
Six stables	100
Five wagon sheds	100
One feed room	75
One shop building	98
Silver townsite, Mount Hope:	
Commissary	95
Nineteen 12-family married quarters	100
Six 12-family married quarters	99
Two 12-family married quarters	97
Eight 12-family married quarters	95
Four 12-family married quarters	90
Two 32-room bachelor quarters	10
Two 32-room bachelor quarters	20
Two 32-room bachelor quarters	90
Two 32-room bachelor quarters	80
Cristobal incinerator	(1)
Combination shop and warehouse, Cristobal	92
Royal Mail Steam Packet Company's office, Cristobal	55
Applying specification roof to Pier No. 6, Cristobal	[2] 75
Lighthouse, end of East Breakwater, Cristobal	[2] 90
National Catholic War Council Building, Balboa	55
Oil tank (55,000 barrels capacity), Balboa	100
Bake shop, workroom, and storage room, Ancon Hospital	90
Moving four 4-family quarters from Las Cascadas to Quarry Heights	99
Moving old Ancon school building to Balboa	95
Construction of 6 transformer houses, Silver City	100
Repairs to Dredging Division store, Paraiso	98
Concreting floor, Paraiso store	98
Moving buildings 84 and 268 from Empire	99

[1] Completed except for overhead cranes. [2] No work done during the month.

DREDGING DIVISION.

The general movement of material in Cucaracha slide which had diminished during the latter part of last month and the first part of September increased over the entire slide during the last part of the month, partially filling the basin again at the foot of the slide. One dipper dredge working on a double shift basis the entire month removed from this slide 109,100 cubic yards of earth and rock. On the 23d of the month a pipe-line suction dredge started cleaning up the channel on the west side in front of this slide, removing 29,900 cubic yards of earth and rock. The normal channel, of full depth and width, was maintained during the month with no interference to Canal traffic.

Including the excavation for September, the dredges have removed a total of 2,029,800 cubic yards of earth and rock from this area since the slide of February 22, 1920. One hydraulic grader was engaged the entire month grading and ditching at Barge Repair slide, and another at Cucaracha slide in sluicing. It is estimated that 62,500 cubic yards of earth and rock were sluiced from Cucaracha slide and 37,500 cubic yards of earth from Barge Repair slide during the month. The total excavation during September, including earth, rock, run-of-bank gravel, and sand, was 437,223 cubic yards as follows:

Cubic yards.	Classified as—		Character of work.	Stations.	Equipment
	Earth.	Rock.			
				Cucaracha Slide.	
(1) 109,100	10,000	99,100	Maintenance.....	1805-00 to 1814-00 E.....	*Cascadas.*
(1) 29,900	26,400	3,500	Maintenance.....	1815-00 to 1810-50 W.....	*No. 86.*
(1) 55,100	50,100	5,000	Maintenance.....	1841-00 to 1853-50 E and W.....	*No. 86.*
				Pacific Entrance.	
(2) 15,000	15,000	.....	Maintenance.....	2213-00 to 2216-20 E.....	*No. 84.*
				Toro Point.	
(3) 7,800	5,200	2,600	Aux. construction..	Inner harbor, WR B-1598.....	*Gamboa.*
(3) 78,000	8,800	69,200	Aux. construction..	Area No. 10, Cristobal.....	*Gamboa.*
(3) 16,300	.....	16,300	Aux. construction..	Area No. 11, Cristobal.....	*Gamboa.*
				P. R. R. P-20.	
(4) 83,000	83,000	.....	Maintenance.....	Balboa Inner Harbor.....	*No. 84.*
(4) 7,000	7,000	.....	Construction.....	Balboa Inner Harbor.....	*No. 84.*
(5) [6] 30,723	[6] 30,723	.....	Aux. construction..	Chagres River gravel.....	*Marmot.*
(5) 5,300	5,300	.....	Aux. construction..	Chagres River gravel.....	*Marmot.*
437,223	241,523	195,700			

[1] Gaillard Cut. [2] Pacific entrance. [3] Atlantic terminals. [4] Balboa Inner Harbor. [5] Chagres River. [6] Sand and gravel

The excavated material was dumped as follows:

	Cubic yards.
North of Gamboa	109,100
Rio Grande Valley	85,000
San Juan fill	105,000
Between East Breakwater and Margarita Point	94,300
Outside West Breakwater, 1,000 feet west of channel	7,800
Gamboa gravel plant	30,723
Chagres River, deep water	5,300
Total	437,223

The following excavation remained to be done on October 1:

Location.	Earth.	Rock.	Total.
	Cu. yds.	*Cu. yds.*	*Cu. yds.*
Gaillard Cut	.....	25,000	25,000
Pacific entrance	47,500	82,900	130,400
Total, Canal Prism	47,500	107,900	155,400
Cristobal coaling station	.....	2,100	2,100
Balboa inner harbor	92,850	13,400	106,250
Total, ocean to ocean	140,350	123,400	263,750

MUNICIPAL ENGINEERING DIVISION.

This division had construction work as itemized below in progress during September, with completion on October 1, as shown:

Northern District.

Municipal work, New Cristobal townsite:	Per cent completed.
Grading	[1] 95
Roads	[1] 97½
Water lines	[1] 72
Sidewalks	[1] 86
Sanitary sewers	[1] 75

[1] No work done during the month.

	Per cent completed.
Grading, fill, and general municipal work, new silver townsite, Mount Hope:	
Grading and fill	[1]90
Streets and roads	[1]99
Water lines	[1]99
Sewers, sanitary	[1]95
Sewers, storm	[1]98
Municipal work, 7th and 9th and "G" and "K" streets, Colon:	
Grading	100
Roads	100
Water lines	100
Sidewalks	100
Sanitary sewers	100
Alleyways	100
Roads for west half, Colon stables	[1]99
Installation of water and sewer system, new Panama Railroad Station, Gatun	[1]99
Construction of sidewalks on Lighthouse and Telephone Row, Gatun	[1]30
Municipal work, block 53, Colon:	
Roads	85
Tracks	99
Water lines	[1]95
Sanitary sewers	[1]98
Storm drains	[1]80
Installation of sewer between 9th and 10th streets, Colon	100
Installation of sewer, New Cristobal incinerator	100
Construction of water tank at Camp Bierd	100
Construction of new concrete oil tank at Mount Hope to pumping plant manifold	100
Mixing and pouring concrete for tank foundation for Grebien & Martinz	65
Fire protection for 55,000-barrel oil tank, Cristobal	100

Southern District.

Municipal work for 4 type-14 houses, Quarry Heights	33
Municipal work, Catholic Community building	[1]25
Storm sewer, Javillo fill	[1]99
Sewer, northern avenue to beach	[1]99.1
Box sewer, Panama Railroad yards	97
Demolition of Calidonia Bridge	100
Concreting streets, new Santo Tomas Hospital	86
Municipal work for 3 type-18 houses, Balboa	60
Reconstruction of road, Quarry Heights	95
Water and sewer connections to Shrine Building, Balboa Heights	50

[1]No work done during the month.

Construction work for the Army is separately reported.

The total output of all pumping stations for September was 902,380,815 gallons; and that of the 3 filtration plants 496,443,000 gallons. The consumption of water in Panama City was 82,030,000 gallons, and that for Colon 53,553,000 gallons. Sales of water to 319 vessels at Balboa and Cristobal totaled 13,477,217 gallons. There were 2,627 tons of garbage and 15 dead animals disposed of at the Gavilan Island incinerator during the month.

OCCUPATION OF QUARTERS.

Occupants of Panama Canal and Panama Railroad quarters on September 30, were classified as follows:

	Men.	Women.	Children.	Total.
Americans	3,615	2,064	2,520	8,199
Europeans	133	29	61	223
West Indians	4,927	2,020	4,032	10,979
Totals	8,675	4,113	6,613	19,401
Totals on August 31	8,696	4,093	6,543	19,332

WORKING FORCE.

(Effective September 22, 1920.)

Department or Division.	Gold.	Silver.	Total.
Operation and Maintenance:			
Office	29	39	68
Building Division	294	782	1,076
Electrical Division	239	255	494
Municipal Engineering	110	1,190	1,300
Lock Operation	165	566	731
Dredging Division	182	1,122	1,304
Mechanical Division	1,036	1,755	2,790
Marine Division	198	500	698
Fortifications	71	359	430
Totals	2,323	6,568	8,891

Department or Division.	Gold.	Silver.	Total.
Supply Department:			
Quartermaster	217	1,748	1,965
Subsistence	36	377	413
Commissary	319	1,615	1,934
Cattle Industry, Plantations	27	431	458
Hotel Washington	10	91	101
Totals	609	4,262	4,871
Accounting	252	9	261
Health Department	244	832	1,076
Executive Department	548	231	779
Panama Railroad:			
Superintendent	76	604	680
Transportation	142	183	325
Receiving and Forwarding Agency	100	1,400	1,500
Coaling Station	127	928	1,055
Totals	1,489	4,187	5,676
Grand total	4,421	15,017	19,438

PUBLIC HEALTH.

One hundred and sixty-three deaths occurred during September from the population comprising the Canal Zone and the cities of Panama and Colon. Tuberculosis, colitis and enteritis, and pneumonia, with 21, 18, and 16 deaths, respectively, were the leading causes of mortality in the order named. One hundred and twenty-six cases of malaria were reported during the month, with 2 deaths, both of whom were nonresidents of the Isthmus. Influenza caused 3 deaths, typhoid fever 2, pellagra 2, and diphtheria 1.

Three hundred and ninety-five births were reported for the month, 28 of which were stillbirths. Deaths under 1 year of age numbered 44, giving an infant mortality rate, based on the number of births reported, of 119.9 for the month.

RECEIPTS AND SALES OF MATERIALS AND SUPPLIES.

The total value of the material ordered on United States requisitions and received on the Isthmus during September was $969,095.02. Of this material, $938,166.68 was chargeable to Operation and Maintenance, $25,315.50 to Construction and Equipment, and $5,612.84 to miscellaneous departments.

The total cash sales on the Isthmus from storehouses and obsolete stores for September amounted to $225,105.69, of which $48,643.53 was for stock, $171,467.60 for fuel oil, $3,242.22 for scrap, and $1,752.34 for obsolete second-hand material.

Sales to steamships from storehouses amounted to $171,459.71, of which $28,522.21 was for miscellaneous stock items and $142,937.50 for fuel oil. Total sales of commissary supplies to all purchasers for September amounted to $960,773.60, made up as follows: To steamships other than United States Government vessels and those of the Panama Railroad Steamship Line, $108,767.28; to The Panama Canal, $126,391.28; to the United States Government, including the Army and Navy, $119,448.52; to individuals and companies, mainly through charge accounts at the retail commissaries, $22,973.55; to the Panama Railroad, including its steamships and the Hotel Washington, $33,342.86, and to individuals purchasing coupons, $549,850.11.

FINANCIAL RECEIPTS AND EXPENDITURES.

The cash balance in Canal appropriations on September 30, exclusive of fortifications, was $17,453,227.75. The balance in fortification funds allotted to The Panama Canal was $1,535,719.20. Payments from appropriations made by the Disbursing Clerk, Washington, amounted to $655,886.44, and by the Paymaster on the Isthmus to $1,720,992.08. Purchase of commissary books from the Panama Railroad Company amounted to $368,653.07.

Collection of tolls on the Isthmus totaled $1,003,531.38. Deposits of $62,200 were made with the Assistant Treasurer of the United States to be applied in payment of tolls and other charges against vessels using the Canal. The total Panama Canal collections on the Isthmus were $2,024,281.16, and collections by the Disbursing Clerk, Washington, $30,441.52. Receipts from Canal Zone and miscellaneous funds were $166,950; disbursements from the same source were $208,670.48. September payrolls on the Isthmus aggregated $1,358,649.74, as compared with $1,359,317.45 for August, a decrease of $667.71 from last month.

Respectfully,

CHESTER HARDING,
Governor.

Distribution of cargo passing through the Canal from the Pacific to Atlantic, September, 1920.*

From—	North America. United States. North Atlantic ports.	North America. United States. South Atlantic ports.	North America. United States. Gulf ports.	North America. United States. Total, United States.	North America. Atlantic terminus.	North America. West Indies.	North America. Total, North America.	Europe. British Isles.	Europe. Denmark.	Europe. France.	Europe. Germany.	Europe. Holland.	Europe. Italy.	Europe. Norway and Sweden.	Europe. Spain and Portugal.	Europe. Europe.[1]	Europe. Total, Europe.	Egypt.	South Africa.	Grand totals.	Per cent of total cargo.
South America:																					
Chile	55,879	28,886	26,028	110,793	239	14,699	125,731	23,227	.....	6,949	2,290	10,781	132	.....	4,439	4,857	52,675	16,980	.....	195,386	34.6
Colombia	1,801	.....	.....	1,801	1,902	.....	3,703	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,703	0.6
Ecuador	505	.....	.....	505	1,385	13	1,903	8	.....	.....	.....	.....	.....	.....	.....	.....	8	.....	.....	1,911	0.3
Peru	12,538	.....	1,527	14,065	3,294	.....	17,359	6,717	.....	.....	41	.....	.....	.....	.....	.....	6,758	.....	.....	24,117	4.3
West coast of South America[1]	380	.....	.....	380	404	.....	784	168	.....	.....	22	.....	1,287	.....	.....	7,896	9,373	.....	.....	10,157	1.8
Total, South America	71,103	28,886	27,555	127,544	7,224	14,712	149,480	30,120	.....	6,949	2,353	10,781	1,419	.....	4,439	12,753	68,814	16,980	.....	235,274	41.6
North America:																					
Pacific Coast of United States	60,880	.....	.....	60,880	3,522	279	64,681	53,855	.....	5,266	20	.....	631	3,000	816	.....	63,588	.....	6,323	134,572	23.8
West coast of Canada	.....	.....	.....	.....	.....	.....	.....	7,367	.....	175	.....	.....	.....	.....	.....	.....	7,542	.....	1,911	9,453	1.6
West coast of Mexico	5,567	.....	.....	5,567	8	.....	5,575	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,575	1.0
Central America	296	.....	.....	296	1,799	.....	2,095	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,095	0.4
West coast of North America[1]	.....	.....	.....	.....	.....	.....	.....	1,035	.....	.....	.....	.....	.....	.....	.....	.....	1,035	.....	.....	1,035	0.2
Total, North America	66,743	.....	.....	66,743	5,329	279	72,351	62,257	.....	5,441	20	.....	631	3,000	816	.....	72,165	.....	8,234	152,750	27.0
Asia:																					
China	9,831	.....	.....	9,831	.....	908	10,739	.....	5,010	.....	2,919	.....	.....	.....	.....	.....	7,929	.....	.....	18,668	3.3
Japan	13,229	.....	.....	13,229	.....	813	14,042	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14,042	2.5
Indo-China and Malay Peninsula	8,507	.....	.....	8,507	.....	.....	8,507	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,507	1.5
Philippines and East Indies	42,496	.....	.....	42,496	.....	.....	42,496	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	42,496	7.5
India	.....	.....	609	609	.....	.....	609	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	609	0.1
East Asiatic ports[1]	17,942	.....	.....	17,942	.....	.....	17,942	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17,942	3.2
Total, Asia	92,005	.....	609	92,614	.....	1,721	94,335	.....	5,010	.....	2,919	.....	.....	.....	.....	.....	7,929	.....	.....	102,264	18.1
Australasia:																					
Australia	1,771	.....	.....	1,771	.....	.....	1,771	2,743	.....	.....	.....	.....	.....	.....	.....	.....	2,743	.....	.....	4,514	0.8
New Zealand	19,020	.....	.....	19,020	.....	.....	19,020	38,320	.....	.....	.....	.....	.....	.....	.....	.....	38,320	.....	.....	57,340	10.1
Australasia[1]	7,305	.....	.....	7,305	.....	.....	7,305	256	.....	.....	.....	.....	.....	.....	.....	.....	256	.....	.....	7,561	1.3
Total, Australasia	28,096	.....	.....	28,096	.....	.....	28,096	41,319	.....	.....	.....	.....	.....	.....	.....	.....	41,319	.....	.....	69,415	12.3
Hawaiian Islands	5,637	.....	.....	5,637	.....	.....	5,637	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,637	1.0
Grand totals	263,584	28,886	28,164	320,164	12,553	16,712	349,899	133,696	5,010	12,390	5,292	10,781	2,050	3,000	5,255	12,753	190,227	16,980	8,234	565,340	100.0
Per cent of total cargo	46.6	5.1	5.0	56.7	2.2	3.0	61.9	23.6	0.9	2.2	0.9	1.9	0.4	0.5	0.9	2.3	33.6	3.0	1.5	100.0	.....
Percentage last month	29.9	7.4	6.0	43.4	6.9	4.2	54.5	32.3	.....	1.3	0.5	0.4	.....	.....	1.2	4.8	40.6	3.3	.....	100.0	.....

[1] General cargo, not routed to permit a more specific segregation.

*By long tons, 2,240 pounds.

Distribution of cargo passing through the Canal from the Atlantic to the Pacific, September, 1920.*

From—	South America.						North America.						Asia.					Australasia.					
	Chile.	Colombia.	Ecuador.	Peru.	West coast, South America.[1]	Total, South America.	Pacific Coast, United States.	West coast, Canada.	Central America.	Pacific terminus, Panama Canal.	West coast, North America.[1]	Total, North America.	China.	Japan.	Philippine Islands, East Indies.	East Asiatic ports.[1]	Total, Asia.	Australia.	New Zealand.	Australasia.[1]	Total, Australasia.	Grand totals.	Per cent of total cargo.
North America:																							
United States—																							
North Atlantic ports	6,431	460	.....	170	23,395	30,456	37,362	.....	5	.....	9,081	46,448	22,787	17,333	6,568	19,801	66,489	8,347	.....	17,472	25,819	169,212	38.1
South Atlantic ports	29,448	.....	.....	.....	.....	29,448	861	.....	.....	12,025	.....	12,886	1,536	.....	.....	1,019	2,555	.....	.....	.....	.....	44,889	10.1
Gulf ports	1,500	.....	.....	.....	.....	1,500	10,900	2,200	.....	.....	.....	13,100	17,641	18,442	31	.....	36,114	.....	.....	.....	.....	50,714	11.4
Total, United States	37,379	460	.....	170	23,395	61,404	49,123	2,200	5	12,025	9,081	72,434	41,964	35,775	6,599	20,820	105,158	8,347	.....	17,472	25,819	264,815	59.6
Atlantic terminus, Panama Canal	4,847	1,293	1,342	1,341	.....	8,823	8,333	.....	1,733	.....	.....	10,066	.....	.....	.....	.....	.....	.....	.....	.....	.....	18,889	4.3
Mexican Gulf ports	70,481	.....	.....	.....	.....	70,481	10,000	.....	.....	1,052	.....	11,052	.....	.....	.....	.....	.....	.....	.....	.....	.....	81,533	18.3
West Indies	.....	.....	.....	.....	.....	.....	.....	2,867	.....	.....	.....	2,867	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,867	0.6
Canada, east coast	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,109	.....	.....	6,109	6,109	1.4
Total, North America	112,707	1,753	1,342	1,511	23,395	140,708	67,456	5,067	1,738	13,077	9,081	96,419	41,964	35,775	6,599	20,820	105,158	14,456	.....	17,472	31,928	374,213	84.2
Europe:																							
British Isles	4,601	.....	.....	.....	10,512	15,113	2,375	327	.....	.....	2,700	5,402	.....	.....	.....	.....	.....	.....	21,614	14,154	35,768	56,283	12.6
Denmark	.....	.....	.....	.....	.....	.....	600	.....	.....	.....	.....	600	.....	.....	.....	.....	.....	.....	.....	.....	.....	600	0.1
France	900	.....	.....	.....	.....	900	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	900	0.2
Holland	3,050	.....	.....	.....	.....	3,050	50	20	.....	.....	.....	70	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,120	0.7
Italy	.....	.....	.....	84	816	900	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	900	0.2
Norway and Sweden	700	.....	.....	.....	.....	700	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	700	0.2
Europe[1]	.....	.....	.....	.....	.....	.....	.....	120	.....	.....	478	598	.....	.....	.....	.....	.....	.....	.....	.....	.....	598	0.1
Total, Europe	9,251	.....	.....	84	11,328	20,663	3,025	467	.....	.....	3,178	6,670	.....	.....	.....	.....	.....	.....	21,614	14,154	35,768	63,101	14.2
South America, east coast	.....	400	.....	.....	.....	400	6,503	.....	.....	.....	.....	6,503	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,903	1.6
Grand totals	121,958	2,153	1,342	1,595	34,723	161,771	76,984	5,534	1,738	13,077	12,259	109,592	41,964	35,775	6,599	20,820	105,158	14,456	21,614	31,626	67,696	444,217	100.0
Per cent of total cargo, Sept.	27.5	0.5	0.3	0.4	7.8	36.4	17.2	1.2	0.4	2.9	2.8	24.7	9.4	8.0	1.5	4.7	23.6	3.2	4.9	7.1	15.2	100.0	.....
Per cent of total cargo, Aug.	25.3	0.7	0.4	2.1	4.4	32.8	13.9	1.8	0.3	3.6	0.2	20.1	9.2	11.5	3.1	5.4	29.3	7.7	8.3	1.7	17.7	100.0	.....

[1] General cargo, not routed so as to allow segregation among various ports.

*By long tons, 2,240 pounds.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, October 30, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Remuera	23	14.20	24	6.15	24	13.36	24	20.14	British	New Zealand Shipping Co	485.0	62.3	26.7	London	Wellington	General	6,149	11,664	8,776
Cauca	20	15.05	24	6.25	24	12.50	24	15.35	British	Pacific Steam Navigation Co	246.0	35.6	16.3	Cristobal	Guayaquil	General	1,101	1,582	1,023
Eelbeck	23	21.40	24	6.25	24	15.02	24	16.10	American	Williams Dimond Co. (S. B.)	401.7	54.8	20.7	New York	Tacoma	General	4,415	6,928	5,103
Jamaica	20	16.26	24	9.15	24	16.19	24	19.05	British	Pacific Steam Navigation Co	220.0	34.0	13.2	Cristobal	Tumaco	General	984	1,187	622
Inca	22	15.50	24	10.20	24	17.54	24	18.50	British	Pacific Steam Navigation Co	375.0	43.0	21.1	New York	Guayaquil	General	2,273	3,952	2,742
Oneka	24	11.52	24	12.15	24	19.45	24	23.28	British	Standard Transportation Co	411.8	52.0	27.6	Philadelphia	Chefoo	Petroleum	7,000	6,399	4,841
Apolo	24	21.30	25	6.18	25	13.32	25	14.31	Spanish	Maritime Union	375.0	52.0	17.0	Newcastle	Arica	Ballast		4,719	3,522
Felix Taussig	24	14.38	25	6.20	25	14.14	25	15.25	American	Crowell & Thurlow	395.0	55.0	27.11	Norfolk	Antofagasta	Coal	8,400	6,520	4,472
Fargo	25	8.12	25	10.00	25	17.35	25	21.53	American	Paragon Shipping Corp. (S. B.)	251.0	43.6	25.8	Philadelphia	Valparaiso	Coal	3,289	2,857	1,783
Dolphin[1]	25	10.42	25	10.58	25	18.25	28	17.00	American	United States Navy	256.0	33.0	15.0	Boston	Puntarenas				
North American	25	7.58	25	13.15	25	20.20	25	21.20	British	American Metal Transp. Co	351.0	43.6	20.1	New York	Talcahuano	Coke, general	3,027	2,444	1,571
West Togus	25	18.00	26	6.15	26	16.28	26	21.19	American	North Atlantic & Western (S.B.)	409.8	54.2	19.0	Boston	Portland	General mdse	3,747	6,589	4,838
Lompoc	26	1.22	26	6.50	26	14.39	26	17.17	British	C. T. Bowring & Co	435.0	58.8	26.6	Tampico	Taltal	Crude oil	5,180	7,488	5,342
National Bridge	26	2.09	26	7.00	26	15.11	26	21.19	American	Wessel Duval & Co. (S. B.)	324.0	46.2	24.1	Norfolk	Iquique	Coal	4,500	3,959	2,649
Acajutla	16	18.04	26	8.25	26	15.20	26	20.11	British	Pacific Steam Navigation Co	215.7	33.5	16.7	Cristobal	Champerico	General	1,000	1,273	706
Lorain	25	18.07	26	10.35	26	18.46	27	12.00	American	U. S., Australia and Asiatic Line (S. B.)	395.0	55.0	26.6	New York	Cairns	General	10,170	7,288	5,207
Virgilia	26	7.36	27	6.00	27	14.00	27	15.07	British	Cunard Steamship Co	423.0	56.0	24.0	New York	Sydney	General	7,122	6,334	4,552
Santa Elisa	26	17.45	27	6.00	27	13.09	27	14.23	American	W. R. Grace & Co	360.3	51.7	21.1	New York	Valparaiso	General	1,419	5,957	4,325
Panama Maru	26	14.25	27	6.22	27	14.36	27	15.35	Japanese	Osaka Shosen Kaisha	400.0	51.0	20.0	New Orleans	Kobe	General	2,538	6,099	4,289
Knut Hamsun	27	12.30	27	13.25	27	20.44	27	21.45	Norwegian	Olaf Orvig	310.0	44.0	21.0	Baltimore	Callao	Coal and coke	3,563	2,972	2,086
Lake Fithian	27	17.47	28	6.07	28	13.38	28	14.35	American	New Orleans & South America S. S. Co. (S. B.)	253.0	43.0	21.7	New Orleans	Guayaquil	General	2,117	2,915	1,907
Alvarado	28	9.14	28	9.38	28	16.24	28	22.15	American	Pacific Transportation Co	245.0	41.5	25.3	New Orleans	San Francisco	General	1,750	1,400	1,504
Sherman	28	9.58	28	10.10	28	17.27	28	23.35	American	Sherman Steamship Co	400.0	45.0	26.0	New York	Antofagasta	Coke, etc	4,922	5,037	3,492
Dunclutha	27	19.30	28	12.40	28	20.06	29	10.10	British	Pacific Steam Navigation Co	360.0	49.0	17.0	Liverpool	Mejillones	Ballast		4,310	3,213
West Hartland	28	17.57	29	6.40	29	15.02	30	1.10	American	Pacific Steamship Co. (S. B.)	410.0	54.0	23.7	Norfolk	Pearl Harbor	Coal	6,834	6,582	4,830
Gambada	29	6.50	29	7.52	29	15.46	29	18.07	British	British India Steam Nav. Co	400.0	52.7	20.9	New York	Melbourne	General	6,300	5,843	4,167
Caddo	28	7.00	29	9.00	29	16.51	29	20.43	American	Standard Oil Co	427.0	55.0	29.0	Mata Redondo	Pisagua	Crude oil	8,300	6,438	4,391
Oreoma	28	12.32	29	12.18	29	18.55	30	7.50	British	Pacific Steam Navigation Co	512.0	62.0	26.6	Liverpool	Coronel	General	2,645	12,227	7,942
D. A. D. G. 76	13	6.42	29	13.05	29	20.02	30	6.57	British	British Government	460.0	58.2	15.6	Leith	Portland	Ballast		8,039	5,640
Ionic	28	22.04	29	13.10	29	21.10	29	22.12	British	Oceanic Steam Navigation Co	500.0	63.0	29.6	London	Wellington	General	5,000	12,250	9,590
Rio Gatun[2]	28	16.54	29	11.55	29	14.07			Panaman	A. R. Echardt	31.4	8.0	7.0	Cristobal	Gatun Lake	General	2	10	8
Edgehill	29	21.13	30	6.15	30	14.33	30	15.49	American	Green Star Line (S. B.)	409.0	54.0	24.0	Baltimore	Shanghai	General	6,355	7,451	5,845
Bearport	29	15.50	30	6.22	30	15.20	30	18.29	American	Columbia and Pacific Co. (S. B.)	401.0	53.0	23.0	Philadelphia	San Francisco	Coal and iron	6,000	6,611	4,725
Major Wheeler	30	10.15	30	10.37	30	18.23	30	18.28	American	Lind Navigation Co. (S. B.)	305.0	46.0	22.6	Philadelphia	Callao	Coal	4,324		
Chilo	23	18.04	30	11.06	30	17.51	30	18.52	British	Pacific Steam Navigation Co	350.3	43.0	19.0	Cristobal	Valparaiso	General	600	4,065	2,668
Essequibo	29	8.15	30	11.58	30	18.53	30	19.40	British	Pacific Steam Navigation Co	450.0	57.6	24.0	New York	Valparaiso	General	1,425	9,037	6,089
Sofia[2]	29	21.10	30	16.20	30	16.30	30	17.50	Panaman	Jacob Spencer	27.5	7.9		Coco Solo	Panama	Ballast		5	4

[1] Gunboat. [2] Launch.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Cordelia	24	4.00	24	8.05	24	15.12	24	22.30	British	Union Oil Co.	420.3	54.6	19.0	Taltal	Tampico	Ballast		6,690	4,971
Cacique	23	21.40	24	8 41	24	16.33	24	18.00	American	W. R. Grace & Co.	394.2	52.3	29.0	Taltal	Savannah	Nitrate, copper	[11]8,721	6,610	4,993
Subchaser 284	8	14.58	24	8.50	24	15.02			American	United States Navy	110.0	15.0		Balboa	Cristobal				
Borneo Maru	24	6.30	24	8.55	24	17.20	24	19.00	Japanese	Osaka Shosen Kaisha	385.0	51.0	24.6	Calcutta	New Orleans	General	[12]7,762	5,919	4,400
Bermuda	24	0.1	24	9.41	24	17.39	25	3.30	British	Lawther Latta & Co.	469.4	56.2	28.0	Portland	Cristobal[6]	Wheat	[11]8,991	8,886	6,775
Madawaska	24	3.59	24	10.27	24	19.15	25	4.05	American	United States Government	490.4	55.3	26.9	San Francisco	New York	(7)	[10]1,975		
Hoboken	24	12.15	24	12.52	24	20.20	25	1.05	American	Todd Shipyard and Const. Co.	380.4	53.1	22.6	Seattle	New York	Pincapples	[13]6,800		
Kayseeka	24	16.30	25	6.42	25	14.40	26	2.35	American	Thorndyke & Trenholme (S. B.)	400.7	54.2	24.6	Seattle	Limerick	Wheat	7,300	6,529	4,712
Sag Harbor	24	16.50	25	6.43	25	15.30	25	21.20	American	Tracy Steamship Corp. (S. B.)	264.6	42.2	21.5	Iquique	Norfolk	Nitrates	3,300	2,504	1,701
Waterbury	24	17.20	25	7.06	25	16.45	26	3.15	American	Williams, Dimond & Co. (S. B.)	400.7	54.2	22.6	Seattle	Havre	General	7,059	6,529	4,737
R-27[3]	9-27	14.57	25	7.31	25	16.10			American	United States Navy	175.0	16.0		Balboa	Cristobal				
R-21[3]	9-27	15.00	25	7.35	25	16.10			American	United States Navy	175.0	16.0		Balboa	Cristobal				
San Joaquin	25	3.00	25	7.39	25	16.44	25	19.07	Norwegian	W. Wilhelmsen	425.5	57.1	19.0	Antofagasta	Tampico	Ballast		7,059	5,075
Ardmore	26	.15	26	8.31	26	15.37	26	15.37	American	Standard Oil Co.	449.6	50.1	18.0	San Francisco	Tampico	Ballast		8,636	6,321
Royal Arrow	26	10.15	26	11.40	26	18.50	26	18.50	American	Standard Oil Co.	467.6	62.7	20.0	San Francisco	Beaumont	Ballast		9,932	7,128
Balboa	26	14.25	26	15.02	26	22.00	1	6.45	American	Colombian Maritime Co.	190.0	29.1	14.8	Buenaventura	Cristobal	(8)	655.70	741	350
Archer	26	20.54	27	7.42	27	15.16	27	15.16	American	Luckenbach Steamship Co. (S.B.)	440.0	56.0	26.0	San Francisco	New York	Ties, general	[14]		
Memphis	26	23.50	27	8.09	27	16.40	27	19.20	British	Pacific Steam Navigation Co.	471.9	61.0	26.9	Astoria	United King.	Flour	9,793	9,100	6,750
Santa Teresa	27	.30	27	8.47	27	16.42	27	17.40	American	W. R. Grace & Co.	360.2	51.6	23.1	Valparaiso	New York	Nitrates, etc.	2,900	5,726	4,086
Astoria[4]	27	3.45	27	9.23	27	17.55	28	17.35	American	United States Navy	319.7	46.0	21.0	Oakland	Norfolk	General	2,008		
West Canon	27	4.05	27	9.53	27	18.36	28	21.50	American	E. C. Evans & Son (S. B.)	410.5	54.0	25.7	Portland	Cork	Wheat	6,300		
Almelo	27	3.00	27	14.09	27	22.00	28	7.40	Dutch	Royal Netherland S. S. Co.	447.5	62.8	28.0	Talcahuano	Hamburg	(9)	9,721	9,403	6,653
Manu	28	7.25	28	8.40	28	17.20	29	16.50	Spanish	Suarez & Munez	365.0	45.0	24.8	Taltal	Azores[6]	Nitrates	5,000	4,152	2,855
Nobel	28	7.55	28	9.20	28	19.20			Norwegian	Patagas Steamship Co.	140.4	28.6	12.2	Iquique	Cristobal[6]	Nitrates	[11]450	396	307
Ortega	28	11.55	28	14.57	28	22.15	29	12.50	British	Pacific Steam Navigation Co.	465.3	56.3	22.9	Talcahuano	Liverpool	General	[12]3,261	8,345	4,998
Architect	28	14.30	28	15.30	28	23.20	29	3.30	British	T. & J. Harrison Line	410.6	52.3	25.6	San Francisco	London	General	7,000	6,245	4,306
Port Alma	29	6.00	29	8.18	29	17.00	29	19.00	British	Commonwealth and Dom. Line	450.6	55.0	25.0	Melbourne	United King.	(10)	[11]4,868	8,204	6,235
Sofia[2]	28	15.00	29	8.20	29	21.10	30	15.15	Panaman	Jacobo Spencer	27.5	7.9		Panama	Coco Solo				
Urubamba	29	11.45	29	13.28	29	20.44			Peruvian	Peruvian Line	381.2	45.9	23.0	Callao	Cristobal	General	3,817	4,803	2,951
Stanley Dollar	29	15.45	30	6.50	30	14.35	30	14.35	American	Robert Dollar Line	288.8	44.6	20.3	San Francisco	New York	General	(15)	3,460	2,404
Cleveland[5]	16	20.15	30	7.20	30	14.35			American	United States Navy	309.0	44.0		Guayaquil	Curacao				
Ruapehu	29	22.35	30	7.53	30	16.00			British	New Zealand Shipping Co.	457.3	58.3	25.0	Auckland	London	Frozen, general	[11]4,458	9,338	7,108
Aysen	30	3.00	30	8.37	30	16.04			Chilean	South American Steamship Co.	379.6	44.3	19.0	Valparaiso	Cristobal	General	1,138¼	4,535	3,068
Morristown	30	6.03	30	8.48	30	17.15	31	8.12	American	Wessel Duval & Co. (S. B.)	377.0	52.0	23.0	Caleta Colosa	Charleston	Nitrates	[11]6,515	5,206	3,743
Westmeath	30	8.50	30	9.52	30	18.50	31	12.53	British	Union Steamship Co. of N. Z.	475.0	56.1	27.0	Wellington	Avonmouth	General	[11]5,651	9,530	6,682
Western Cross	20	16.00	30	10.36	30	19.45	30	21.10	American	Thorndyke & Trenholme (S. B.)	409.5	54.2	23.6	Seattle	London	Lumber	[11]7,000	6,372	4,498
Palm Branch	30	11.20	30	12.18	30	20.50	30	23.47	British	F. & W. Ritson	360.0	45.1	23.0	Antofagasta	Liverpool	General	[11]5,050	4,161	3,133

[3] Submarine. [4] Supply ship. [5] Cruiser. [6] For orders. [7] Government subsistence stores. [8] Coffee, cocoa, sugar, hides, hats, coal, and gold dust. [9] Nitrate and general cargo. [10] Frozen produce and wool. [11] Long tons. [12] Cubics. [13] Short tons. [14] Ties, 3,000,000 feet B. M., general, 6,000. [15] Lumber, 1,599,000 feet B. M., general, 1,200.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
October 24	Calamares	United Fruit Co.	Port Limon.
October 25	Bermuda	Lowther Latta & Co.	High seas.
October 25	Heredia	United Fruit Co.	New Orleans.
October 26	Pastores	United Fruit Co.	New York via Habana.

*DEPARTURES.

Date.	Vessel.	Line.	For—
October 24	Caribbean	Panama Railroad Cattle Industry	Cartagena.
October 24	Calamares	United Fruit Co.	New York via Habana.
October 24	Gen. W. C. Gorgas	Panama Railroad Steamship Line	Puerto Colombia.
October 27	Pastores	United Fruit Co.	Port Limon.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

(Continued on page 172, column 2.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending October 30, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Jamaica	Pacific Steam Navigation Co		October 24		925
Cauca	Pacific Steam Navigation Co		October 24		1,086
Inca	Pacific Steam Navigation Co		October 24		328
Gen. W. C. Gorgas	Panama Railroad Steamship Line		October 24		33
Caribbean	Panama Railroad Cattle Industry		October 24		2
Calamares	United Fruit Co	October 24	October 24	110	633 lbs.
Acajutla	Pacific Steam Navigation Co		October 26		755
Heredia	United Fruit Co	October 25	October 28	905	72
Crynssen	Royal Dutch W. I. Mail S. S. Co	October 26	October 27	15	419½
Balboa	Colombian Maritime Co	October 26		655	
Pastores	United Fruit Co	October 26	October 27	866	117
Panama	Panama Railroad Steamship Line	October 26		2,735	
[1]Cantigny	United States Government	October 27	October 29	159	6
Metapan	United Fruit Co	October 27	October 27	½	7
Turrialba	United Fruit Co	October 27	October 28	30	32
Tivives	United Fruit Co	October 27	October 28	(3)	4
[1]Santa Leonora	United States Government	October 28		250	
Achilles	Panama Railroad Steamship Line	October 28		12,113	
[2]Mamei	Panama Railroad Steamship Line	October 28		7,405	
Caribbean	Panama Railroad Cattle Industry	October 28		350	
Orcoma	Pacific Steam Navigation Co	October 28	October 29	356	(4)
British Soldier	British Tanker Co	October 28		7,701	
Alkmaar	Royal Dutch W. I. Mail S. S. Co	October 29		233	
Urubamba	Peruvian Steamship Co	October 29		3,817	
Essequibo	Pacific Steam Navigation Co	October 29	October 30	130	(4)
Chile	Pacific Steam Navigation Co		October 30		613
Aysen	Chilean Steamship Co	October 30		1,138	

[1] United States Army transport. [2] Barge. [3] No cargo discharged. [4] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending October 30, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Laura C. Hall	Pacific Metals Corporation, Ltd	October 17	October 24	3	83
Chile	Pacific Steam Navigation Co	October 23	October 24	28	
Lady Sybil	International Petroleum Co	October 23	October 30		15
Jamaica	Pacific Steam Navigation Co	October 24	October 24		11
Balboa	Colombian Maritime Co.	October 26	October 26	1	
George Washington	Fred Olsen	October 29		308	

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended October 30:

Submarines *R-21* and *R-27*, periodical overhaul; steamship *Marne*, general repairs; dredge *No. 83*, general repairs; launch *Captain Wilhelm*, hull repairs and installation of new engine; steamship *General Hodges*, general repairs; barge *No. 131*, general repairs; tugs *Bohio*, general repairs; *Cocoli*, rebush main throttle lever, engine, and rebuild brick work; steamship *Western Cross*, repairs to steering gear and blower engine; U. S. S. *Des Moines*, light repairs; U. S. S. *Cleveland*, repairs to rudder stuffing box and refrigerating machine; steamships *Lady Sybil*, heavy repairs; *Benjamin Brewster*, heavy repairs.

The following vessels were at the Cristobal shops for repairs during the week ended November 1:

Steamships *Panama*, *Achilles*, and barge *Mamei*, miscellaneous repairs and painting to engine, deck, and steward departments; steamships *Balboa*, repair injector, piping, lifeboats, etc.; *Urubamba*, electric weld hawse pipe and crack in furnace; S. P. *No. 2232*, clean and paint; general overhaul and alterations; motor ship *Nobel*, repair circulating pump and afterbearing; steamship *Topatopa*, repair steering gear; barges *Nos. 15*, *19*, *118*, *119*, *150*, and *151*, scale and paint; repair hull, etc.; steamship *Manavi*, retube and weld crack in main condenser; renew tubes and weld boiler, etc.; launch *Pequeni*, overhaul both engines; U. S. subchaser *No. 285*, overhaul main and auxiliary engines; steamships *Heredia*, *Metapan*, U. S. A. T. *Cantigny*, steamships *Alkmaar*, *Caribbean*, *Reupehu*, U. S. S. *Fields*, U. S. S. *Cleveland*, steamship *Vinton County*, minor repairs.

Official Circulars.

In Charge of Section of Surveys.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 25, 1920.

To all concerned.—Effective this date and during the absence of Mr. O. E. Malsbury on leave, Mr. F. R. Fitch will act as Assistant Engineer in charge of the Section of Surveys, in addition to his other duties.

CHESTER HARDING,
Governor.

Appointment.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 28, 1920.

CIRCULAR No. 661-91.

Surg. W. C. Rucker, U. S. Public Health Service is appointed Chief Quarantine Officer, effective October 28, 1920, *vice* Surg. S. B. Grubbs, U. S. Public Health Service, relieved from duty with The Panama Canal.

CHESTER HARDING,
Governor.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 27, 1920.

CIRCULAR No. 267:

Effective October 25, 1920, Mr. George W. Green is designated an accountable official of The Panama Canal, *vice* Mr. D. E. Wright, and as such will account for all nonexpendable property in use by the Municipal Division.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
CHESTER HARDING, *Governor.*

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 30, 1920.

CIRCULAR No. 268:

Effective November 1, 1920, Mr. Max Herz is designated an accountable official of The Panama Canal, *vice* Mr. C. Peters, and as such will account for all nonexpendable property in use by the district quartermaster, Pedro Miguel.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
CHESTER HARDING, *Governor.*

Sale of Cement Sweepings.

PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., October 29, 1920.

To all concerned—The Panama Railroad Company has on hand 230 bags of cement *ex* the steamship *Cristobal*, October 9, 1920.

This cement is known as sweepings, or loose cement picked up after the discharge of a steamer. There is very little foreign substance to be found in it, and for almost any concrete work it is just as good as any cement.

We will be glad to have you bid on this lot of cement before 3 o'clock, p. m., Friday, November 5. Please make your bids on basis of keeping the bags, and also returning the bags to us.

A charge of 25 cents per bag will be collected when cement is delivered.

This charge will be refunded when bags are returned in usable condition.

W. F. FOSTER,
Acting Superintendent.

Acting Superintendent, Southern District, Municipal Engineering Division.

THE PANAMA CANAL,
DEPT. OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., October 23, 1920.

To all concerned—Mr. W. E. Maxon is appointed Acting Superintendent, Southern District, Municipal Engineering Division, during period Mr. G. W. Green, Superintendent, is Acting Municipal Engineer.

Effective October 25, 1920.

D. E. WRIGHT,
Municipal Engineer.

Traffic Regulations and Restrictions, Ancon Hospital Grounds.

THE PANAMA CANAL,
HEALTH DEPARTMENT, ANCON HOSPITAL,
ANCON, C. Z., October 18, 1920.

1. *Gorgas Road* (main road) from below Ancon dispensary to and beyond bachelors' quarters, building 217:

(*a*) Governor's Circular 717-2, November 13, 1919, has declared this road a one-way road and no vehicles of any kind will be permitted to use this road in the direction from Panama to the top of the hill, except such vehicles as it may be necessary to admit to the grounds on hospital business.

(*b*) Passenger automobiles will be permitted to pass through the hospital grounds via this road from top of hill toward Panama, provided the engines are cut off and no unnecessary noises are made while passing through the grounds. Trucks, motorcycles, or horse-drawn vehicles will not be permitted to use this road in either direction unless they have business within the hospital grounds.

(*c*) The entrance to the hospital grounds on this road from the Panama side is indicated by a sign just beyond the steps (main entrance) leading to the hospital administration building.

2. *Interior road*—From the arch over road just below isolation building to the arch over road at Gorgas Road just below the bachelors' quarters, Building 217. Entrances to this road are indicated by suitable warning signs.

(*a*) This road will be used only by Ancon Hospital vehicles, Health Department and military ambulances having patients for admission to hospital or removing them therefrom, and Panama Canal trucks when delivering supplies, removing garbage and those required for repair or construction work pertaining to the hospital. No other vehicles than those mentioned above, no jitneys, motorcycles, bicycles, or horses are permitted to use this road in either direction.

(*b*) Patients coming for admission to hospital in vehicles other than ambulances, as designated above, will go to the Admitting Office located in Ancon dispensary, from whence patients will be sent to hospital by an ambulance, or if no ambulances are available and the case is emergency in character, a special permit will be given authorizing the vehicle with patient to use the interior road to carry patient to proper ward.

(*c*) Patients for clinics who are too sick to go thereto by walking up the steps of main entrance to the hospital, will apply at the Admitting Office where provision will be made to convey them to administration-clinics building in an ambulance or, in emergency cases, a written permit will be given authorizing the vehicle to use the interior road.

(*d*) Patients in hospital, who in opinion of the attending physician can not leave on foot, may be sent to the Admitting Office in an ambulance where a public vehicle can be secured. If the attending physician deems that the best interests of the patient require transportation other than an ambulance, permit therefore will be issued by the superintendent's office on telephone request.

(*e*) Motor vehicles authorized to use the interior road will be operated with exhaust completely muffled, silent horns, and avoidance of all other unnecessary noises while passing over this road.

They will be operated slowly and with great care. No parking is permitted under or near the portes cochere at entrances to sections, nor blocking of the road and injuring the curb when turning. When such vehicles are not in motion, engines must be stopped.

Permits will be retained by the driver of the vehicle and will be shown when requested by hospital or police officials.

3. *Restrictions of traffic* in the hospital grounds are absolutely necessary to eliminate noise, which is very disturbing to the sick. These regulations, if carefully observed by all concerned, will afford maximum comfort and quiet to the sick and very little inconvenience, if any, to the public.

It is, therefore, requested that strict compliance therewith be observed by all concerned.

Violations of these regulations will be reported to the police or proper authorities for disciplinary action.

L. T. HESS,
Superintendent Ancon Hospital.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., November 1, 1920.

The following insufficiently addressed mail matter has been received in the office of the Director of Posts and may be obtained upon request of the addressee. Request for forwarding can be made by telephone, calling No. 182, Balboa:

Apple, Mrs. G. M.
Belcher, G.
Brett, C. A.
Buckholder, J. C.
Carmona, Cleotilde
Casseries, Lille de
Churchwell, J. E.
Compton, John
Courter, H. C.
Cownden, W. K.
Dalziel, T.
Days, Joseph M.
Dayton, Mrs. Teresa P.
Doughety, I., Box 148.[1]
Dowd, S. H. Q.
Esdaile, Chas. D.
Fowler Mrs. H. H.
Fowler, Mrs. J. C., Box 236
Fraser, J. A.
Ganahl, Capt. Alfred
Harkey, Mrs. C. S.
Hart, Rev. J. J.
Illsley, Mrs. Carrie
James, Norman
Merrill, Miss Jessie, Box 43.[2]
Neble, Mrs. Geo.
Nellis, H. W.
Rischman, Jos. F.
Ryce, Mrs. Wm. R.[1]
Shannon, Gaylord W.
Sterrano, Mrs. J. L.
Tatum, R. N.
Towler, Mrs. H. H.
Turner, Eral
Welcoxon, Earnest

[1] Package. [2] Card.

Sale of Electric Blue-printing Machine and Motor.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., November 10, 1920, for the purchase of electric blue-printing machine and motor located at office of the Mechanical Division, Balboa. Form of proposal may be had upon application.

Administrator's Sale.

The Administrator of Estates, room 301, Administration Building, Balboa Heights, offers for sale, for account of the estate of Edwin L. Larsen, deceased American employee of The Panama Canal, a new 2-piece suit of dark gray tweed (commissary goods) of the following measurements: Coat, 41; trousers, length and waist, both 33½. The clothes may be examined and tried on any weekday between 8 a. m. and 8 p. m. and on Sundays between 8 a. m. and noon, at the tailor shop of Robert C. Smith, No. 1 Calle I, Panama, opposite Smallwood's garage.

The sale price of the suit is $35, and should be paid to the Administrator, who will then order the tailor to release the garments. Persons desiring to offer less than $35 may make written bids on the property, and send them to the Administrator in sealed envelopes, marked "Bid on suit of Edwin L. Larsen, deceased." Bids will be opened in the Administrator's office at 11 a. m., Monday, November 8, 1920, in case the clothes have not been previously sold at the $35 price. No deposit of money is required with bids, and the Administrator reserves the right to reject any or all bids.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 169.

PORT OF CRISTOBAL—continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
October 26	Crijnssen	Royal Netherlands W. I. Mail	Amsterdam via wayports
October 26	Panama	Panama Railroad Steamship Line	New York via Haiti
October 26	Talamanca[16]	United Fruit Co.	Port Limon
October 27	Cantigny[17]	United States Army	New York
October 27	Metapan	United Fruit Co.	New Orleans via wayports
October 27	Turrialba	United Fruit Co.	New York via Kingston
October 27	Tivives	United Fruit Co.	Santa Marta, Colombia
October 28	Santa Leonora[17]	United States Army	New York
October 28	Achilles[18]	Panama Railroad Steamship Line	Norfolk
October 28	Caribbean	Panama Railroad Cattle Industry	Cartagena
October 28	British Soldier	British Tanker Co.	Tampico

[16] Motor yacht. [17] Transport. [18] And barge *Mamei*.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—
October 24	Laura C. Hall[19]	Pacific Metals Corporation	Buenaventura
October 30	Lady Sybil	International Petroleum Co.	Talara

[19] Motor schooner.

*Other than ships passing through the Canal.

*DEPARTURES.

Date.	Vessel.	Line.	For—
October 27	Metapan	United Fruit Co.	New Orleans
October 27	Crijnssen	Royal Netherlands W. I. Mail	Cartagena
October 28	Talamanca[16]	United Fruit Co.	Colon
October 28	Heredia	United Fruit Co.	N. Orleans, Bocas, Habana
October 28	Tivives	United Fruit Co.	New York and Kingston
October 28	Turrialba	United Fruit Co.	N. Y. Colombia, Kingston
October 29	Bermuda	Lowther Latta & Co.	Cardiff
October 29	Cantigny[17]	United States Army	New York vi. San Juan

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.
PUBLISHED WEEKLY.
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Volume XIV. Balboa Heights, C. Z., November 10, 1920. No. 13.

Traffic and Tolls in October.

The number of ocean-going commercial ships making the transit of the Canal during the month of October was 238, of which 119 went through in each direction. The tolls earned on them amounted to $911,825.58. In addition, 7 small vessels (6 launches and 1 rowboat) made the transit, paying $29 in tolls. The total earnings of tolls amounted to $911,854.58. The average tolls per ocean-going commercial ship were $3,831.32; the average for all vessels on which tolls were charged, $3,721.86. Ocean-going commercial ships averaged 7.7 per day.

The tolls earned in September, 1920, were $1,010,166.38, and those in August, $936,209.44. The September figure is the highest of record, and September is the only month in which the earnings have amounted to as much as $1,000,000. The tolls for October have been exceeded only by those for September and August, 1920, the previous high record having been $891,375.70, in December, 1919.

Detail of the traffic in October is published below.

Canal Traffic in October.

The Canal traffic for October, 1920, for commercial vessels, is shown as classified in the following tabulation:

PACIFIC TO ATLANTIC.

WEST COAST OF UNITED STATES TO EUROPE.

No. of vessels.	Registry.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
							Long tons.
12	United States	42,701	53,928	64,998	42,370	$53,376.25	75,386
6	British	31,217	34,854	39,419	24,813	38,651.05	52,768
1	Dutch	4,863	6,066	7,655	4,799	6,078.75	8,339
1	French	3,436	3,512	4,617	3,436	4,214.40	5,336
1	Norwegian	4,523	5,627	7,093	4,479	5,653.75	9,000
1	Swedish	2,248	4,089	3,767	2,865	2,810.00	5,550
22		88,988	108,076	127,549	82,762	110,784.20	156,379

WEST COAST OF SOUTH AMERICA TO EAST COAST OF UNITED STATES.

14	United States	32,709	40,550	52,647	33,125	$40,838.75	60,264
3	British	8,558	11,513	15,283	8,979	10,697.50	17,570
1	Norwegian	4,509	5,637	7,116	4,493	5,636.25	10,000
1	Danish	3,005	3,515	4,465	2,853	3,756.25	6,400
1	Spanish	2,283	2,632	3,627	3,102	2,853.75	4,114
20		51,064	63,847	83,138	52,552	63,782.50	88,348

WEST COAST OF SOUTH AMERICA TO CRISTOBAL.

8	British	5,387	8,642	11,740	6,224	$6,691.55	4,122
3	Peruvian	4,010	8,315	12,666	6,614	5,012.50	9,478
2	Chilean	3,260	5,645	6,367	3,888	4,075.00	1,193
2	United States	672	700	1,230	744	840.00	1,338
1	German	2,854	3,517	4,568	2,885	3,567.50	5,000
16		16,183	26,819	36,571	20,355	20,186.55	21,131

PACIFIC TO ATLANTIC—Continued.

WEST COAST OF SOUTH AMERICA TO EUROPE.

No. of vessels.	Registry.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
							Long tons.
7	British	23,180	29,505	39,337	23,492	$28,975.00	29,503
2	French	7,231	8,322	11,606	7,301	9,038.75	13,269
2	Norwegian	2,997	3,646	4,642	3,011	3,746.25	6,250
1	Dutch	4,250	6,653	6,899	4,417	5,312.50	9,720
1	German	3,030	4,599	4,849	3,027	3,787.50	6,010
13		40,688	52,725	67,333	41,248	50,860.00	64,752

WEST COAST OF SOUTH AMERICA TO MEXICO.

4	United States	18,321	20,458	27,178	17,812	$14,917.86	Ballast.
2	Norwegian	8,871	10,183	13,948	8,840	7,331.76	Ballast.
2	British	8,880	10,313	13,803	8,691	7,425.36	Ballast.
8		36,072	40,954	54,929	35,343	29,674.98	Ballast.

UNITED STATES COASTWISE.

7	United States	28,535	34,438	43,900	27,682	$32,559.63	34,426

AUSTRALASIA TO EUROPE.

5	British	28,272	32,338	40,330	25,922	$35,243 40	23,686

FAR EAST TO EAST COAST OF UNITED STATES.

4	Japanese	14,502	16,686	22,188	14,437	$18,023.75	28,370

WEST COAST OF UNITED STATES TO EAST COAST OF MEXICO.

3	United States	12,934	16,203	20,832	12,801	$13,402.73	6,000

AUSTRALASIA TO EAST COAST OF UNITED STATES.

2	United States	8,180	9,986	11,712	7,228	$10,225.00	15,879
1	British	5,648	6,500	8,722	5,645	7,060.00	6,000
3		13,828	16,486	20,434	12,873	17,285.00	21,879

SOUTH AMERICA TO AZORE ISLANDS (FOR ORDERS).

1	British	4,270	4,610	5,742	4,279	$5,337.50	6,621
1	Spanish	2,497	2,855	4,044	2,497	3,121 25	5,000
1	Japanese	2,979	3,033	3,857	2,364	3,639.60	5,240
3		9,746	10,498	13,643	9,140	12,098.35	16,861

WEST COAST OF SOUTH AMERICA TO WEST INDIES.[1]

2	German	4,009	4,672	6,544	4,042	$4,938.25	5,000
1	Spanish	3,292	3,250	4,291	2,678	3,900.00	6,118
3		7,301	7,922	10,835	6,720	8,838.25	11,118

[1] Exclusive of Cuba and Porto Rico.

WEST COAST OF CENTRAL AMERICA TO CRISTOBAL.

2	British	1,288	1,398	2,298	1,304	$1,610 00	718
1	Costa Rican	172	185	158	93	215.00	192
3		1,460	1,583	2,456	1,397	1,825.00	910

HAWAIIAN ISLANDS TO EAST COAST OF UNITED STATES.

2	United States	5,977	8,276	9,506	5,976	$7,471.25	12,371

PACIFIC TO ATLANTIC—Continued.

BALBOA TO EAST COAST OF UNITED STATES.

No. of vessels.	Registry.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
							Long tons.
1	United States	5,972	7,008	11,081	5,970	$5,045.76	Ballast.

VLADIVOSTOK TO EUROPE.

1	United States	4,876	6,201	7,612	4,887	$6,095.00	945

BALBOA TO MEXICO.

1	United States	5,635	5,553	6,836	5,258	$4,226.25	Ballast.

WEST COAST OF SOUTH AMERICA TO AFRICA.

1	British	3,202	4,067	5,272	3,198	$4,002.50	7,622

WEST COAST OF CANADA TO EUROPE.

1	British	4,078	4,125	4,821	3,140	$4,950.00	6,000

WEST COAST OF UNITED STATES TO CRISTOBAL.

1	United States	767	742	1,088	767	$958.75	805

WEST COAST OF UNITED STATES TO CUBA.

1	Norwegian	486	496	632	486	$595.20	750
119	Total	380,566	465,043	591,016	372,914	$447,909.05	502,353
131	Total last month	415,242	504,436	646,437	412,864	$515,895.81	565,340

ATLANTIC TO PACIFIC.

EAST COAST OF UNITED STATES TO WEST COAST OF SOUTH AMERICA.

No. of vessels.	Registry.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
14	United States	44,556	52,097	66,742	44,408	$52,043.76	59,411
5	British	16,279	20,634	27,971	17,086	20,348.75	15,787
1	Japanese	3,859	4,440	6,079	3,850	4,823.75	7,018
1	Belgium	3,158	4,049	5,072	3,094	3,947.50	5,700
1	Norwegian	1,841	2,086	2,903	1,850	2,301.25	3,968
22		69,693	83,306	108,767	70,288	$83,465.01	91,884

EAST COAST OF UNITED STATES TO FAR EAST.

7	United States	29,968	39,270	44,857	28,675	$37,460.00	50,674
7	British	25,557	32,341	38,870	24,471	31,946.25	51,170
4	Japanese	17,879	20,379	26,993	17,505	22,199.80	23,798
18		73,404	91,990	110,720	70,651	91,606.05	125,642

EUROPE TO WEST COAST OF SOUTH AMERICA.

7	British	20,114	24,820	34,959	20,636	$24,268.36	13,872
3	Spanish	6,557	7,685	10,196	6,572	5,533.20	Ballast.
2	Dutch	7,130	11,200	11,312	7,140	8,912.50	3,988
1	Italian	3,716	4,915	7,870	4,547	4,645.00	1,000
1	French	3,638	4,170	5,796	3,689	4,547.50	1,542
1	Swedish	2,244	4,019	3,745	2,858	2,805.00	3,689
1	Norwegian	2,237	3,767	3,660	2,221	2,796.25	5,923
16		45,656	60,576	77,538	47,663	53,507.81	30,014

ATLANTIC TO PACIFIC—Continued.

No. of vessels.	Registry.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
	UNITED STATES COASTWISE.						
13	United States	43,839	51,477	65,137	43,191	$54,548.45	*Long tons.* 44,659
	CRISTOBAL TO WEST COAST OF SOUTH AMERICA.						
8	British	7,115	11,426	15,060	8,245	$8,869.55	8,835
2	Peruvian	2,504	5,364	7,922	3,941	3,130.00	4,085
2	United States	1,103	1,092	1,703	1,139	995.25	242
1	Chilean	1,463	2,577	2,553	1,600	1,828.75	527
1	Costa Rican	172	185	158	93	133.20	Ballast.
14		12,357	20,644	27,396	15,018	14,956.75	13,689
	EAST COAST OF UNITED STATES TO AUSTRALASIA.						
8	British	26,919	33,141	42,093	26,392	$33,648.75	48,185
2	United States	8,352	10,134	12,465	8,498	10,440.00	17,170
10		35,271	43,275	54,558	34,890	44,088.75	65,355
	MEXICO TO WEST COAST OF SOUTH AMERICA.						
3	United States	14,185	15,813	20,547	13,927	17,417.75	25,281
2	Norwegian	8,862	10,203	13,983	8,856	11,077.50	18,700
2	British	7,211	8,030	11,415	7,079	9,013.75	10,180
7		30,258	34,046	45,945	29,862	37,509.00	54,161
	EUROPE TO WEST COAST OF UNITED STATES.						
3	British	11,995	14,936	18,850	11,529	$13,972.05	1,512
3	United States	12,000	14,403	18,085	11,959	13,727.39	7,460
6		23,995	29,339	36,935	23,488	27,699.44	8,981
	EUROPE TO AUSTRALASIA.						
5	British	30,499	36,105	48,653	30,636	$38,123.75	32,967
	CANARY ISLANDS TO WEST COAST OF SOUTH AMERICA.						
2	Spanish	4,432	5,201	6,791	4,257	$3,744.72	Ballast.
	CRISTOBAL TO WEST COAST OF CENTRAL AMERICA.						
2	British	1,288	1,398	2,298	1,304	$1,610.00	1,685
	MEXICO TO BALBOA, CANAL ZONE.						
1	United States	5,635	5,554	6,836	5,258	$6,664.80	10,500
	EAST COAST OF UNITED STATES TO WEST COAST OF CANADA.						
1	United States	3,450	5,448	5,687	3,450	$4,312.50	7,100
	CRISTOBAL TO WEST COAST OF UNITED STATES.						
1	United States	1,654	2,163	2,643	1,654	$2,067.50	2,076
	CRISTOBAL TO BALBOA.						
1	Panaman	16	14	16	16	$12.00	Ballast.
119	Total	381,447	470,536	599,920	381,626	$463,916.53	488,713
125	Total last month	407,933	504,349	647,033	404,946	$494,954.82	444,217

Notice to Mariners.—Lights Established, Cristobal Harbor.

THE PANAMA CANAL, BALBOA HEIGHTS, C. Z., November 4, 1920.

CIRCULAR No. 643-78:

1. The two white occulating lights referred to in Circular No. 643-77, dated September 16, 1920, were established on October 29, 1920, near the western extremity of East Breakwater, Cristobal Harbor, within the "L." Position, latitude 9° 23′ 23″ North, longitude 79° 55′ 07″ West. These lights are unwatched. Illuminant, acetylene gas.

UPPER LIGHT—Focal plane 110 feet, visible 18 miles, exhibited from top of pyramidal steel latticework tower painted black. Characteristic, white, flashing; 0.5 second light, 3.0 seconds dark; 0.5 second light, 3.0 seconds dark; 5.0 seconds light, 8.0 seconds dark (one group of flashes every 20 seconds).

LOWER LIGHT—Exhibited from bracket on the northwestern extremity of tower. Focal plane 38 feet, visible 9 miles. Characteristic, white, flashing; 1 second light, 1 second dark.

2. The gas buoy marking the western extremity of the East Breakwater has been permanently discontinued.

(C. & G. S. Charts Nos. 950 and 954. H. O. Charts Nos. 1290, 5000, 5002, and 5258.)

CHESTER HARDING,
Governor.

Tariff Amendment—Quarantine Services.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 25, 1920.

To all concerned—The following amendments are made to Tariff No. 4—Schedule of Rates for Supplies and Services Furnished to Shipping and Allied Interests at The Panama Canal:

ITEM 29—QUARANTINE.

Effective November 1, 1920.

3. Fumigation of vessels, for labor and supervision, etc.:

Vessels under 1,000 tons net	$15.00
Vessels 1,000 tons net or over	25.00
For sulphur used, per pound	.10
For sodium cyanide used, per pound	.65
For sulphuric acid used, per pound	.30

For launch service, per hour. Rates shown in item 6.

CHESTER HARDING,
Governor, The Panama Canal.
President, Panama Railroad Company.

(NOTE.—The above amendments will be included in Supplement No. 3 to Tariff No. 4 when this supplement is issued.)

Tariff Amendment—Diesel Oil.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 26, 1920.

To all concerned—The following amendment is made to Panama Canal Tariff No. 4, Schedule of Rates for Supplies and Services Furnished to Shipping and Allied Interests at The Panama Canal:

ITEM 22—FUEL AND DIESEL OILS.

Effective October 26, 1920.

2. Diesel oil per barrel of 42 gallons, delivered to vessels at Cristobal..... $4.50

CHESTER HARDING,
Governor, The Panama Canal.
President, Panama Railroad Company.

(NOTE.—The above amendment will be included in Supplement No. 3 to Tariff No. 4 when this supplement is issued.)

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, November 6, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Rio Grande	30	14.36	31	6.08	31	13.09	31	14.30	Norwegian	Det. Nordenfjeldske S. S. Co.	360.3	52.1	24.7	Christiania	Valparaiso	General, coal	5,923	5,137	3,767
Orari	30	13.35	31	6.25	31	13.37	31	14.50	British	New Zealand Shipping Co	460.0	60.2	29.3	Glasgow	Littleton	General	8,000	9,827	6,895
Shunko Maru	30	22.40	31	6.46	31	15.24	31	16.38	Japanese	Gogoshaki & Co	425.0	53.0	27.7	New York	Yokohama	General	7,759½	6,923	5,304
S. V. Harkness	31	5.30	31	6.50	31	14.24	31	20.02	American	Standard Oil Co	435.0	57.0	27.6	Tampico	Pisagua	Crude oil	8,781	7,443	5,545
Alkmaar	29	12.47	31	10.28	31	17.37	1	11.25	Dutch	Royal Netherlands W. I. Mail	464.0	62.6	16.0	Hamburg	Valparaiso	General	1,775	9,505	6,807
Lisbon Maru	30	11.40	31	11.15	31	19.24	31	20.28	Japanese	Nippon Yusen Kabushiki Kaisha	445.0	58.0	24.0	New York	Yokohama	General	7,816	7,608	5,479
Vinton County	31	9.00	1	6.15	1	12.55	1	15.02	American	Caribbean Steamship Co. (S. B.)	251.0	43.6	15.1	New York	Guayaquil	General	334	2,866	1,828
Mineola	31	21.54	1	6.23	1	13.59	1	15.11	American	W. R. Grace & Co	298.6	40.0	21.0	New York	Mollendo	General	2,520	2,835	1,822
Balboa	26	22.00	1	6.45	1	14.36	2	16.17	American	Colombian Maritime Co	190.0	29.1	13.0	Cristobal	Buenaventura	General	374	741	350
Duns Law	1	6.40	1	7.00	1	15.16	2	14.10	British	Thomas Law	340.0	50.1	21.6	Sabine	Adelaide	Sulphur	5,170	3,919	2,863
Richeoncal	1	15.55	2	6.27	2	13.43	2	17.05	American	McAllister Brothers (S. B.)	435.0	56.0	25.6	Tampico	Iquique	Crude oil	9,500	7,642	5,327
Acme	2	5.20	2	6.50	2	15.30	2	16.30	American	Standard Oil Co	435.0	56.0	27.0	Port Arthur	Woosung	Petroleum	8,807	7,405	5,166
Durham	2	5.30	2	6.50	2	14.47	2	17.40	British	New Zealand Shipping Co	420.0	54.0	26.6	Montreal	Auckland	General	3,795	7,138	5,296
Espana[1]	2	7.00	2	9.02	2	17.30	8	12.45	Spanish	Spanish Government	434.6	78.0	26.4	San Juan	Valparaiso	.....	.....	.....	.....
Eastern Merchant	2	10.04	2	10.35	2	18.30	2	19.22	American	Pacific Mail Steamship Co. (S.B.)	445.0	58.0	18.0	Baltimore	Los Angeles	Steel	3,210	8,617	6,297
Statesman	1	7.37	2	12.10	2	19.07	2	20.18	British	Harrison Steamship Line	423.0	53.0	14.0	Liverpool	San Francisco	Ballast	.....	6,361	4,592
Mount Berwyn	2	8.05	2	12.55	2	19.53	2	21.02	British	H. E. Moss	400.0	50.0	16.0	Genoa	Vancouver	General	368	5,783	4,008
Aysen	30	16.04	2	13.37	2	20.15	2	22.03	Chilean	South American Steamship Line	379.6	44.3	22.3	Cristobal	Valparaiso	General	450	4,535	3,068
Oregonian	2	22.42	3	6.50	3	13.25	3	14.20	American	American-Hawaiian Line	406.0	51.0	19.0	New York	Los Angeles	General	2,086	5,959	4,203
Forst	2	22.15	3	7.25	3	14.56	3	15.41	British	George Dodd & Co	450.0	58.0	16.1	Middlesboro	Portland	Ballast	.....	7,606	5,200
Somerset	3	8.45	3	9.45	3	16.58	3	17.50	British	Federal Steam Navigation Co	460.0	62.0	28.0	New York	Littleton	General	13,224	9,943	7,530
Los Angeles	4	6.12	4	7.00	4	14.37	4	15.28	American	Union Oil Co	435.0	56.0	29.0	Tampico	Los Angeles	Oil	11,000	7,380	5,195
Celebes Maru	4	9.50	4	10.04	4	16.40	5	10.35	Japanese	Osaka Shosen Kaisha	395.0	51.0	20.0	New Orleans	Yokohama	General	1,938	6,014	4,406
Cape Henry	3	23.15	4	10.50	4	18.20	4	19.37	American	Atlantic Gulf & Pacific S. S. Co.	376.0	52.0	24.6	Baltimore	Los Angeles	General	6,300	5,146	3,557
Fort Wayne	5	4.35	5	6.20	5	13.51	5	15.00	American	Williams, Dimond & Co. (S. B.)	409.0	54.0	16.0	Boston	Los Angeles	General	1,772	6,736	4,945
Moerdijk	5	5.45	5	7.15	5	14.43	5	16.00	Dutch	Holland-American Line	473.0	61.0	17.0	London	San Francisco	General	2,500	9,165	6,961
Cedar Branch	5	12.33	5	12.55	5	20.10	6	10.35	British	F. & W. Ritson	390.5	52.0	21.0	London	Coronel, wypts	General	4,266½	4,912	3,642
Maple Branch	5	14.30	6	6.17	6	13.45	6	14.45	British	Nautilus Steam Shipping Co	400.0	52.0	19.11	Antwerp	Corral	General	2,680	5,618	4,116
Mattie Luckenbach	5	18.00	6	6.27	6	14.03	6	15.12	American	Luckenbach Steamship Line	331.5	47.0	23.0	New York	San Francisco	General	3,800	4,808	3,768
Waukegan	5	8.30	6	6.43	6	16.17	.....	.....	American	Barber Steamship Line (S. B.)	405.0	55.0	27.7	Norfolk	Cavite, P. I.	Coal	8,340	7,285	5,256
Urubamba	29	20.55	6	9.40	6	16.40	6	18.12	Peruvian	Peruvian Line	381.2	41.1	19.6	Cristobal	Callao	General	1,202	4,803	2,951
Auldmuir	6	3.54	6	10.24	6	17.38	7	7.38	British	Glen & Co	314.0	47.0	20.0	Baltimore	Valparaiso	Coke	3,226	3,188	2,262
Tranquebar	6	10.07	6	13.30	6	20.09	6	23.02	Danish	Orient Steamship Co	370.0	47.0	21.3	Copenhagen	Salaverry	General, cement	4,000	4,393	3,209

[1] Battleship.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

George Washington[2]	29	22.20	31	6.39	31	14.05	2	5.00	Norwegian	Fred Olsen	425.5	53.3	28.6	San Francisco	Bergen	Flour and general	9,000	7,505	5,627
Texas	30	15.15	31	6.47	31	15.20	31	17.05	Danish	United Steamship Co	364.0	48.5	23.6	Taltal	Norfolk	Nitrates	6,400	4,817	3,515
Topa Topa	30	17.01	31	6.55	31	15.55	1	16.17	American	Suth. & Christenson (S. B.)	410.0	54.4	23.2	Westminster	Immingham	Douglas fir ties	(13)		
Eemdijk	31	3.00	31	7.55	31	16.36	31	16.26	Dutch	Holland-American Line	467.0	58.0	24.5	San Francisco	Rotterdam	General	8,300	8,514	6,066
Alsace	31	13.20	31	14.05	31	21.52	1	12.45	French	A. D. Bordes	400.3	52.4	25.5	Iquique	La Pallice	Nitrates	7,069	5,879	4,156
Jungle Queen[3]	31		31		31				American	H. M. Brunn				Balboa	Gatun Lake				
Pyro[4]	31	15.00	1	7.45	1	15.15	4	2.06	American	United States Navy	459.8	61.1	21.0	Bremerton	Hampton R'ds	Ammunition	93½		
Santa Barbara	1	5.30	1	8.20	1	15.45	1	21.10	American	W. R. Grace & Co	404.6	53.9	29.0	Mejillones	Charleston	Nitrates, copper	8,733	6,789	4,746
Rooke	1	2.30	1	8.47	1	16.55	1	18.20	British	Strick Line, Ltd	345.9	48.1	22.0	Mejillones	Norfolk	Nitrates	5,418	4,061	2,961
Heilbronn	31	23.55	1	9.40	1	18.20	1	21.55	British	British Ministry of Shipping	474.9	60.6	26.6	Portland	Norfolk[8]	Wheat	9,954	9,028	6,151
Artigas	1	6.00	1	9.54	1	18.55	1	18.55	American	N. Atlantic & Western Co. (S.B.)	390.0	54.2	21.8	Portland	Boston	General	5,261	6,161	4,427
Adelina	1	9.20	1	11.20	1	19.30	2	1.41	Spanish	Naviera Guadalquiver S. S. Soc.	359.7	49.9	24.6	Iquique	Magala, Spain	Nitrates	6,200	4,460	3,090
Minnequa	1	8.00	1	12.17	1	20.55	5	6.21	American	Wessel Duval & Co. (S. B.)	390.0	54.2	23.6	Iquique	Savannah	Nitrates	11,300	6,106	4,355
Ellen[5]	31	14.00	1	8.15	1	19.35	2	7.15	Panaman	A. Chepo	37.6	11.7	3.0	Panama	Colon	(9)	1		
Guadimar	2	8.00	2	8.57	2	18.34	2	23.45	Spanish	Anonima Guadalquiver	350.0	43.0	25.3	Mejillones	Valencia	Nitrates	5,617	3,926	2,737
Drumeltan[6]	1	15.00	2	9.32	2	18.12	2	20.00	British	Standard Transportation Co	266.0	40.2	14.0	Yokohama	New York	Ballast		1,964	1,793
Alloway	2	16.45	3	7.21	3	14.35	3	17.46	American	Barber Steamship Line (S. B.)	402.0	53.0	25.0	Shanghai	Boston	(10)	[14]7,448	6,565	4,862
Saint Jean	3	6.15	3	8.36	3	18.35	4	13.50	French	French Line	397.0	50.1	25.0	Talcahuano	Bilbao, Spain	Nitrates, general	6,750	5,849	4,031
Jalapa	3	6.50	3	9.02	3	17.30	3	23.32	American	Thorndyke Trenholme & Co. (S.B.	402.6	53.1	26.6	Seattle	Lisbon	Wheat	7,305	6,580	4,887
Salvador	3	15.20	4	6.32	4	13.30			British	Pacific Steam Navigation Co	215.0	33.0	13.6	Champerico	Cristobal	(11)	169	1,213	692
Springfield	28	7.45	4	6.38	4	14.30	4	14.30	American	N. Atl. & Western Co. Ltd. (S.B.)	410.5	54.2	22.0	Portland	Boston	Lumber, general	[14]7,401	6,576	4,971
San Pasqual	3	15.30	4	6.54	4	15.55			American	Col Shipping Co. Ltd. (S. B.)	420.7	54.0	21.0	San Pedro	Tampico	Ballast		6,630	4,563
Tuscanster	4	10.10	4	10.56	4	18.40	4	23.13	British	Blue Star Line	420.0	54.0	26.0	Hankow	New York	Frozen eggs	[15]6,200		
San Jose	3	7.20	4	12.16	4	19.50			American	Pacific Mail Steamship Co	283.0	37.0	15.0	San Francisco	Cristobal	General	472	2,352	1,602
City of Vancouver	4	14.20	5	6.46	5	15.05	6	3.45	British	Canadian-Western S. S. Co	411.5	54.1	23.0	Vancouver	W. Hartlepool	Railroad ties	[14]6,860		
Ullstad	4	14.40	5	6.50	5	16.22	5	20.35	Norwegian	Grefstad Redi	350.0	50.9	23.1	San Francisco	Norfolk[8]	Barley	6,100		
Henry T. Scott	5	1.15	5	7.30	5	16.15	5	20.20	American	Alaska Steamship Co	234.5	42.7	17.8	Supe	New York	Sugar	1,806	1,814	951
Benjamin Brewster	23	21.30	5	8.55	5	17.39	6	12.55	American	Standard Oil Co	411.6	53.4	21.0	Iquique	Tampico	Ballast		6,360	4,337
Saint Finbarr[7]	5	10.15	5	11.10	5	17.30			British	British Ministry of Shipping	135.7	29.5	13.4	Mejillones	Cristobal[8]	Ballast		449	109
Thessalia	5	10.15	5	11.49	5	21.55			German	Hamburg-American Line	411.0	50.7	22.0	Mejillones	Cristobal[8]	Nitrates	4,000		
Lucie Woermann	6	4.00	6	7.30	6	15.35	6	21.10	German	Deutsches Segelschiff	366.5	47.1		Caleta Buena	Norfolk	Nitrates	4,000		
Saint Blazey[7]	6	6.15	6	8.32	6	15.36			British	British Government	135.4	29.1	13.6	Arica	Cristobal[8]	Ballast		447	101
Santa Rita	6	6.00	6	10.59	6	22.55			German	Hamburg-American Line	392.0	50.2	23.0	Valparaiso	Hamburg	(12)	5,122		

[2] Motor ship. [3] Launch. [4] Collier. [5] Motor schooner. [6] Sailer. [7] Tug. [8] For orders. [9] 3 rolls wire, 8 kegs wire clamps. [11] Coffee, hides, and bullion.
[10] Sugar, hemp, fire crackers, tea, lumber, rice, tin, and general. [12] Nitrates, borax, and general. [13] 3,941,878 feet B. M. [14] Long tons. [15] Short tons.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Oct. 31	Pastores	United Fruit Co	Port Limon.
Oct. 31	Gen. W. C. Gorgas	Panama Railroad Steamship Line	Colombian ports.
Nov. 2	Parismina	United Fruit Co	New Orleans.
Nov. 2	Ulua	United Fruit Co	New York via Habana.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Oct. 31	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Oct. 31	British Soldier	British Tanker Co	Tampico.
Oct. 31	Pastores	United Fruit Co	New York via Habana.
Nov. 1	Panama	Panama Railroad Steamship Line	New York and Haiti.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

(Continued on page 186, column 2.)

Tariff Amendment—Coal.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 26, 1920.

To all concerned—The following amendments are made to Panama Canal Tariff No. 4, Schedule of Rates for Supplies and Services Furnished to Shipping and Allied Interests at The Panama Canal:

ITEM 21—COAL.

Effective November 1, 1920.

	Cristobal-Colon.	Balboa.
1. For steamships, including warships of all nations, delivered from coaling plants or alongside of vessels in lighters or in cars on the wharves and trimmed in bunkers, per ton of 2,240 pounds, except as provided in paragraph 2	$18.00	$20.00
2. For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting transit		18.00
3. To steamships taking less than carload lots from plants, or less than 25 tons from lighters	19.50	21.50
6. For coal for cargo which will be delivered only in exceptional cases after special authority is given by the Governor	20.50	22.50

CHESTER HARDING,
Governor, The Panama Canal.
President, Panama Railroad Company.

(NOTE.—The above amendments will be included in Supplement No. 3 to Tariff No. 4 when this supplement is issued.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending November 6, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Caribbean	Panama Railroad Cattle Industry		October 31		18½
Pastores	United Fruit Co	October 31	October 31	120	440 lbs.
Vinton County	United States Shipping Board	October 31.	November 1	411	(2)
Gen. W. C. Gorgas	Panama Railroad Steamship Line	October 31	November 5	5	3,011
Balboa	Colombian Maritime Co		November 1		4
Panama	Panama Railroad Steamship Line		November 1		3,022
[1]Santa Leonora	United States Government		November 1		87½
Statesman	Harrison Steamship Line	November 1	November 2	1,112	(2)
Aysen	Chilean Steamship Line		November 2		450
Ulua	United Fruit Co	November 2	November 3	695	8
Parismina	United Fruit Co	November 2	November 4	1,125	142
Ancon	Panama Railroad Steamship Line	November 2		9,715	
Abangarez	United Fruit Co	November 4	November 4	½	3
Caribbean	Panama Railroad Cattle Industry	November 4		260	
San Jose	Pacific Mail Steamship Co	November 4		271	
Salvador	Pacific Steam Navigation Co	November 4		164	
Gen. G. W. Goethals	Panama Railroad Steamship Line	November 5		2,761	
Tranquebar	Orient Steamship Co	November 6	November 6	1	(2)
Urubamba	Peruvian Line		November 6		1,202

[1] United States Army transport. [2] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending November 6, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Balboa	Colombian Maritime Co	November 1	November 1		28
San Jose	Pacific Mail Steamship Co	November 3	November 4	196	
Salvador	Pacific Steam Navigation Co	November 3	November 4	6	
Anyo Maru	Toyo Kisen Kaisha	November 4		2,271	
Laura C. Hall	Pacific Metals Corporation, Ltd	November 4		31	
Iris	Swayne & Hoyt	November 6		583	

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended November 5:

Steamship *Marne*, general repairs; dredge *No. 83*, general repairs; launch *Captain Wilhelm*, hull repairs and installation of new engine; steamship *General H. F. Hodges*, general repairs; barge *No. 131*, general repairs; tugs *Bohio*, general repairs; *Cocoli*, rebush main engine throttle lever and rebuild brickwork; steamships *Western Cross*, repairs to steering gear and blower engine; *Benjamin Brewster*, heavy repairs; *Uncas*, weld cracked H. P. astern column and slipper; *Major Wheeler*, boiler repairs; launches *Captain Harris*, repairs to gasoline engine; *Limon*, engine repairs; steamships *Springfield*, repack condenser tubes and install spare H. P. rings; *S. V. Harkness*, renewing 1 blade on propeller; *Ullstad*, install 2 cocks.

The following vessels were at the Cristobal shops for repairs during the week ended November 8:

Steamships *Ancon*, *Gen. W. C. Gorgas*, and *Gen. George W. Goethals*, miscellaneous repairs and painting to engine, deck, and steward departments; *Minnequa*, remove and renew blistered boiler tubes, repair emergency valve, etc.· *San Pascual*, repair feed pump, dynamo engine, air pump, auxiliary pump, and fire boxes; tug *St. Minver*, repair dynamo engine; steamship *San Jose*, repair feed pump, safety valves, etc.; dredge *Gamboa*, repair condenser, backing engine, and miscellaneous minor repairs; steamship *Santa Rita*, repair steering gear; S. P. *No. 2232*, general overhaul and alterations; launch *Pequeni*, overhaul both engines; U. S. S. C. *285*, overhaul main and auxiliary engines; steamships *Parismina*, *Benjamin Brewster*, *Waukegan*, *Caribbean*, *City of Vancouver*, *Salvador*, tug *St. Catherine*, launch *Conroy*, U. S. S. *Pyron*, tug *St. Finbar*, minor repairs.

Whole Cargo of Frozen Eggs.

The steamship *Tuscan Star* of the Blue Star Line passed through the Canal on November 4 with a whole cargo of frozen eggs, amounting to 6,200 tons. She was bound from Hankow, via Nankin, to New York.

If it be considered that 10 eggs weigh a pound, the *Tuscan Star's* cargo of 6,200 tons represents 11,573,333 dozen, or about six-tenths of 1 per cent of the annual production in the United States, which is estimated at 1,830,000,000 dozens.

The November issue of *Pacific Ports* contains a statement that the value of the exports of eggs from China is approximately $14,000,000 annually; and that four-fifths of the eggs exported are dried or frozen.

Prices of Miscellaneous Supplies.

The following are prices to individuals and companies, including the 25 per cent surcharge, effective November 1, 1920:

Commodities.	Unit.	Price.
Brass, bar	Lb.	$0.40
Brass, sheet	Lb.	.75
Bronze, Tobin	Lb.	.375
Cement, at Panama:		
Including bag and surcharge	Bag	2 11
Credit for empty bag returned	Bag	.25
Cement, at Colon:		
Including bag and surcharge	Bag	1.95
Credit for empty bag returned	Bag	.25
Charcoal	Cwt.	1.25
Copper, bar	Lb.	.44
Gasoline, in drums, motor grade	Gal.	.56
Lead, sheet	Lb.	.17
Lead, pig	Lb.	.125
Lumber, ceiling, siding and flooring, 1" x 6"	M ft. B. M.	118.75
Lumber, flooring, 1" x 3" and 1" x 4"	M ft B. M.	143 75
Lumber, yellow pine or fir, exeept ceiling	M ft. B. M.	100.00
Metal, yellow	Lb.	.375
Nuts, iron, machine, hexagon	Lb.	.25
Nuts, iron, machine, square	Lb.	.225
Nails, common wire	Lb.	.11

Commodities.	Unit.	Price.
Nails, galvanized	Lb.	$0.15
Oakum, navy, spun	Lb.	.20
Oakum, navy, unspun	Lb.	.175
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl of 42 gals	3.50
Oil, fuel, at Balboa and Cristobal, in drums or barrels, no surcharge	Bbl of 42 gals	3.75
Oils, greases, and lubricants:		
Oil, air, compresser cylinder	Gal.	.575
Oil, ammonia cylinder	Gal.	.685
Oil, burning	Gal.	1.56
Oil, cylinder, dark, marine	Gal.	1.125
Oil, cylinder, dark, marine	Gal.	1.25
Oil, ice, machine, steam	Gal.	1.00
Oil, engine, dynamo	Gal.	.79
Oil, engine, in tins	Gal.	.69
Oil, engine, in barrels	Gal.	.575
Oil, gas, engine, heavy, in barrels	Gal.	1.00
Oil, gas, engine, heavy, in cases	Gal.	1.125
Oil, gas, engine, in drums, medium	Gal.	.60
Oil, kerosene, in drums	Gal.	.375
Oil, kerosene, in tins (cases)	Gal.	.45
Oil, linseed, boiled	Gal.	2.50
Oil, linseed, raw	Gal.	2.60
Oil, locomotive engine	Gal.	.59
Oil, lard	Gal.	2.125
Oil, marine engine	Gal.	1.06
Oil, marine engine	Gal.	.625
Oil, marine engine	Gal.	.44
Oil, marine engine	Gal.	.75
Oil, marine engine	Gal.	1.02
Oil, mineral seal	Gal.	.375
Oil, nonliquid	Lb.	.09
Oil, stationary engine	Gal.	.49
Oil, sperm	Gal.	2.875
Oil, signal	Gal.	1.40
Oil, valve	Gal.	.975
Oil, car	Gal.	.34
Grease, black gear	Lb.	.115
Grease, yellow, cup, No. 3	Lb.	.14
Grease, yellow, cup, No. 5	Lb.	.17
Grease, rod, special	Lb.	.25
Grease, tunnel bearing	Lb.	.215
Tallow	Lb.	.225
Turpentine	Gal.	2.40
Turpentine, substitute	Gal.	.625
Vaseline	Lb.	.11
Paint, white, lead, dry	Lb.	.15
Paint, lead, white, in oil	Lb.	.175
Paint, white, zinc, dry	Lb.	.225
Paint, white, zinc, in oil	Lb.	.21
Paint, zinc, 35 per cent in oil	Lb.	.19
Rivets	Lb.	.10
Rope, Manila, ½" diameter	C. ft.	.69
Rope, Manila, ⅝" diameter	C. ft.	1.50
Rope, Manila, ¾" diameter	C. ft.	2.50
Rope, Manila, ⅞" diameter	C. ft.	4.185
Rope, Manila, 1" diameter	C. ft.	5.075
Rope, Manila, 1⅛" diameter	C. ft.	7.00
Rope, Manila, 1" diameter	C. ft.	8.75
Rope, Manila, 1¼" diameter	C. ft.	12.90
Rope, Manila, 1½" diameter	C. ft.	19.69
Rope, Manila, 1¾" diameter	C. ft.	26.81
Rope, Manila, 2" diameter	C. ft.	31.44
Rope, Manila, 2½" diameter	C. ft.	51.50
Rope, Manila, 3" diameter	C. ft.	76.25
Rope, Manila, 3½" diameter	C. ft.	91.25
Rope, Manila, 4" diameter	C. ft.	124.125
Soap, laundry	Lb.	.175
Soda, ash	Lb.	.05
Steel, bar	Lb.	.06
Steel, spring	Lb.	.21
Steel, cold, round (rolled)	Lb.	.20
Steel, sheet	Lb.	.06
Steel structural (angles, beams, etc.)	Lb.	.06
Tin, block	Lb.	.79
Tin, banca	Lb.	.665
Tin, sheet	Lb.	.225
Washers, cut	Lb.	.15
Waste, colored	Lb.	.26
Waste, white	Lb.	.26
Zinc, boiler plate, ⅝" x 6" x 12"	Lb.	.17

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Dance and Swimming Exhibition at Hotel Aspinwall.

The Hotel Aspinwall announces as attractions for the week-end, a dance on November 13 and a swimming exhibition on November 14.

Reservations of rooms may be made through the manager of the Canal restaurant at Balboa (telephone, Balboa 397).

Change in Taboga Launch Schedule.

The launch leaving Dock 19, Balboa, for Taboga at 10 a. m. and 7 p. m. on Saturdays has been discontinued. The 12.30 p. m. trip from Taboga on Saturdays has been discontinued also. This leaves the schedule with launches daily, except Sundays and holidays from Balboa at 4.30 p. m.; on Sundays and holidays, launch leaves Balboa at 10 a. m.

From Taboga, launch leaves daily at 6.20 a. m., and on Sundays and holidays also at 6.30 p. m.

There is no change except the omission of the extra launches on Saturdays.

The Work of the Industrial Ward in Corozal Hospital.

As a part of the treatment of insane persons whose derangement is slight and frequently temporary, the Superintendent of Corozal Hospital has devoted special attention to the industrial ward. Men and women are employed in various forms of weaving, wood and metal working, and painting, under the instruction and supervision of a nurse who has specialized alike in manual arts and psychopathy.

Some of the patients possessed a craft before they were committed, and are employed at it; such as an elderly negro who is a weaver of Panama hats, and a young man who is a tinsmith, but the most of them are without previous training. They are taught to weave rugs from strips of rags made from old clothes, to make grass bags, etc., from native grasses dyed in various colors, to weave belts out of varicolored threads; or weave baskets of reeds; or to do wood or tin work or painting of different sorts. As far as possible salvaged material and native products are used as raw materials, and the articles which the patients produce are sold. About 30 patients are employed in the ward at present.

In a visit to the salesroom attached to the ward, one may find, in addition to the products indicated above, a miniature toy shop. A wide range of toys, of doll and children's furniture, stuffed and wooden dolls—and more serious articles of use to grown-ups—woven bags, beaded handbags, pincushions, market and waste paper baskets, footstools, collar boxes, cigar and cigarette boxes, bookracks, hand-painted place cards, post cards printed from wood blocks, vases, flower sticks, and canes. A striking feature of all the toys and many of the other articles is the vivid painting. The toys, which are the handiwork of the insane, have a sturdiness and durability in which the usual commercial product is notoriously lacking.

Some of the articles produced in the industrial ward have been placed on sale in the Canal commissaries, most notably the rag rugs; but most of them are sold direct from the shop attached to the ward. The Superintendent has asked that publicity be given to this, in order that more people may come to see the ward and buy its products. They will be welcomed between 8 and 11 in the morning, and 1 and 4 in the afternoon, if they will call at the office of the Superintendent.

Examination for Apprentices.

The Superintendent of the Mechanical Division has issued the following announcement:

A competitive examination for the position of apprentice in mechanical trades of The Panama Canal service, will be held for boys of American parentage, between the ages of 16 and 20, in the Balboa school building on Friday and Saturday, November 19 and 20, 1920.

The above examination, which is both physical and mental, will begin promptly at 9 a. m. The physical examination will be conducted on Friday in the library on the first floor of the main building, and the educational examination will be held on Saturday, in the manual training room of the annex.

All those eligible and desiring to take the examination must submit their applications to the Superintendent, Mechanical Division, not later than Monday, November 15.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletions giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights (telephone 286).

Assistant field agent, protective social measures (male and female); $1,200 to $2,000 a year; form 1312; age, 21 years and over; vacancies exist in the United States Interdepartmental Social Hygiene Board, for duties in Washington, D. C., and in the field; November 17, 1920.

Dentist (male and female); $1,500 a year; form 1312; age, 21 years but not 40 years; vacancies exist in the Indian Service at Large; November 23, 1920.[1]

Director of bureau, division, or section of protective social measures, $3,500 to $4,500 a year; supervisor of protective social measures, $2,800 to $3,600 a year; field agent, protective social measures, $1,800 to $3,000 a year; special assistant agent, protective social measures, $900 to $1,500 a year (male and female); form 2118; age, 21 years and over; November 23, 1920.[1]

Director, publication division (male and female); $3,000 to $3,600 a year; form 2118; age, 21 but not 45 years; a vacancy exists in the Children's Bureau, Department of Labor, Washington, D. C.; November 30, 1920.[1]

District vocational officer (male and female); $2,500 to $4,000 a year; form 2118; a vacancy exists in District No 2 of the Federal Board for Vocational Education, with headquarters at New York, N. Y.; November 30, 1920.[1]

Expert appraiser, estate tax division (male and female); $3,000 to $4,000 a year; form 2118; age, 30 years and over; November 16, 1920.[1]

Highway engineer (male and female); $2,400 to $3,000 a year; form 1312; age, under 35 years; vacancies exist in the Bureau of Public Roads, Department of Agriculture, for duties in the field; December 28, 1920.[1]

Operative (male and female); $900 to $1,000 a year; form 304; vacancies exist in the Federal classified service in Washington, D. C., and elsewhere; November 17 and December 15, 1920.

Shipper (male and female); $1,200 a year; form 304; age, 18 years and over; a vacancy exists in the National Museum, Washington, D. C.; November 17, 1920.

Associate electrical engineer (male and female); $2,500 to $3,000 a year; form 1312; age, 26 years and over, a vacancy exists in the Bureau of Mines, Department of the Interior, for duty at Pittsburgh, Pa.; November 23, 1920.[1]

Lithographic transferrer (male and female); $1,600 a year; form 1800; age, 20 years and over; a vacancy exists in the Hydrographic Office, Navy Department, Washington, D. C.; November 23, 1920.[1]

Mail-bag repairer (male and female); $4 to $5.08 per diem; form 1800; age, 20 years and over; a vacancy exists in the equipment shops of the Post Office Department, Washington, D. C.; November 23, 1920.[1]

Pharmacologist (male and female); $2,500 to $3,000 a year; form 2118; age, 25 but not 45 years; a vacancy exists in the Bureau of Internal Revenue, Treasury Department, Washington, D. C.; November 30, 1920.[1]

Safety engineer (male and female); $8 per diem; age, 24 but not 50 years; a vacancy exists at the Navy Yard, Boston, Mass.; November 30, 1920.[1]

Signalman (male and female); $1,200 a year; form 1312; age, 25 years and over; November 23, 1920; a vacancy exists in the U. S. Coast and Geodetic Survey.[1]

Skilled laborer, qualified in pasteboard box making, grade 1, $900 to $1,200 a year; grade 2, $720 to $900 a year (male and female); form 304; age, 18 years and over; a vacancy exists in the Bureau of Markets, Department of Agriculture, Washington, D. C.; November 23, 1920.[1]

Specialist in market extension (male and female); $3,000 to $4,500 a year; form 2118; age, under 50 years; vacancies exist in the Bureau of Markets, Department of Agriculture, with headquarters at Washington, D. C.; November 30, 1920.[1]

Superintendent and director (male and female); $1,500 to $1,800 a year; form 1312; age, within reasonable limits; two vacancies exist in the Bureau of Fisheries, one for duty at Key West, Fla., and the other at Beaufort, N. C.; November 23, 1920.[1]

Aviation supply expert, grade 1, $1,800 to $2,400 a year; grade 2, $2,400 to $3,000 a year (male and female); form 1312; age, 20 years and over; vacancies exist in the office of the Chief of Air Service, War Department; December 8, 1920.

Electrical engineer and draftsman (male and female); $1,800 a year; form 1312; age, 20 years and over; vacancies exist in the office of the Supervising Architect, Treasury Department, Washington, D. C.; December 7, 1920.[1]

Anatomist (male and female); $1,600 a year; form 1312; age, within reasonable limits; a vacancy exists in the office of the Surgeon General, Army Medical Museum, Washington, D. C.; December 7, 1920.[1]

Anesthetist (male and female); $1,200 a year; form 1312; age, 21 years and over; a vacancy exists in Freedman's Hospital, Washington, D. C.; December 7, 1920.[1]

Apprentice plate cleaner, apprentice transferrer, apprentice picture engraver, apprentice letter engraver (male and female); salary paid these apprentices is $600 for the first year, $700 for the second year; $800 for the third year, and $939 for the fourth year. At the end of the apprenticeship an initial salary of $1,200 a year is paid, and promotion by successive grades to a maximum salary of $4,800 a year for picture engravers, $3,200 a year for letter engravers, $2,700 a year for transferrers, and $1,800 a year for plate cleaners; form 304; December 15, 1920; January 19, and February 16, 1921; age limits, between 16 and 18 years of age.

Assistant animal husbandman (male); $1,200 to $1,500 a year; form 1312; age, 21 but not 45 years; a vacancy exists in the Bureau of Animal Industry, Department of Agriculture, for duty at Baltimore, Md.

Assistant inspectors, child labor division (male and female); $1,400 to $1,600 a year; form 1312; age, within reasonable limits; December 15, 1920.

Calculating machine operator (male and female); $900 to $1,200 a year; form 304; age, 18 years and over; vacancies exist in the departmental service, Washington, D. C., November 17 and December 15, 1920.

Electric draftsman (male and female); $1,200 to $2,400 a year; form 1312; age, 18 years and over; vacancies exist in the office of Chief of Engineers, War Department, Washington, D. C.; February 1, 1921.

Guard (male and female); $720 a year; form 1800; age, 21 but not 60 years; vacancies exist in the State, War, and Navy buildings, Washington, D. C.; December 7, 1920.[1]

Highway engineer; $2,400 to $3,000 a year; the U. S. Civil Service Commission announces that as sufficient eligibles to meet the needs of the service have been obtained, until further notice no applications for this examination will be received unless filed with the Commission at Washington, D. C., prior to the hour of closing business on November 9, 1920.

Inspector, child labor tax division (male and female); $1,800 to $2,400 a year; form 2118; vacancies exist in the Bureau of Internal Revenue, Treasury Department, Washington, D. C.; December 21, 1920.[1]

Junior mechanical engineer (male and female); $2,100 to $2,400 a year; form 1312; a vacancy exist in the Engineer Department at Large of the War Department, for duty at Memphis, Tenn.; December 7, 1920.[1]

Personnel clerk (male and female); $2,200 a year; form 304; age, 21 years and over; a vacancy exists in the position of clerk special personnel at Raritan Arsenal, Metuchen, N. J., and vacancies in positions requiring similar qualifications, in the Ordnance Department at Large, or other branches of the service; December 8, 1920.

Soil bacteriologist (male and female); $3,500 a year; form 2118; age, under 50 years ; a vacancy exists in the Bureau of Plant Industry, Department of Agriculture, Washington, D. C.; December 7, 1920.[1]

Statistician (male and female); $2,400 to $3,600 a year; form 1312; age, within reasonable limits; vacancies exist in the office of the Board of Engineers for Rivers and Harbors, Washington, D. C.; February 1, 1921.

Trained nurse, trained nurse-phychiatric (male and female); $1,320 to $1,680 a year; form 1312; age, male applicants, 20 years but not 40 years; female applicants 20 years, but not 45 years; vacancies exist in the Panama Canal service; December 15, 1920.

[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Official Circulars.

Flags at Half-mast on November 14.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 30, 1920.

To all concerned—The following Proclamation of the President, dated October 8, 1920, is quoted for the information and guidance of all concerned:

"I hereby direct that on Sunday, November 14, 1920, the flag of the United States shall be displayed at half-mast at all military posts, naval stations, on vessels, and on buildings of the United States as a token of the Nation's participation in the memorial services held for the heroic American soldiers, sailors, marines, and others who gave their lives to their country in the World War."

CHESTER HARDING,
Governor.

Children Traveling on Panama Railroad Steamship Line.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., October 29, 1920.

CIRCULAR No. 610-4:

Paragraph 16 of Circular No. 610 is hereby amended, effective November 10, 1920, as follows:

Children under 12 years of age will be charged one-half the fare of the parent; only one child under 3 years of age will be carried free.

CHESTER HARDING,
Governor.

Chief of Record Bureau.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z.; November 6, 1920.

To all concerned—Effective November 1, 1920, Mr. C. M. Lupfer is appointed Chief of the Record Bureau, Executive Office, *vice* Mr. J. C. Kiernan, resigned.

C. A. MCILVAINE,
Executive Secretary.

Approved:
CHESTER HARDING,
Governor.

Acting Superintendent, Cattle Industry Division.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 5, 1920.

To all concerned—Effective to-day, Mr. J. H. K. Humphrey is designated as Acting Superintendent, Cattle Industry Division, and will be in charge of all pastures, plantations, hog farms, poultry farms, dairies, and the operation of the steamship *Caribbean*, with headquarters at Cristobal.

R. K. MORRIS,
Chief Quartermaster.

Approved:
CHESTER HARDING,
Governor.

Armistice Day, November 11.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., November 8, 1920.

HEADS OF DEPARTMENTS AND DIVISIONS:

Request has been made by several organizations of employees that Armistice Day, November 11, or a part of that day, be declared a holiday. This can only be done by an Act of Congress or a Proclamation of the President and no such authority has so far been given.

In order to give employees of The Panama Canal and the Panama Railroad Company an opportunity to participate in Armistice Day celebrations, heads of departments and divisions are authorized to grant permission to be absent on the afternoon of November 11, upon application, in those cases where the services of employees can be spared, such time to be charged to leave due or to be without pay. There will be some cases where it will be impracticable to excuse employees and supervisory officials in charge are requested to arrange to have such work protected.

CHESTER HARDING,
Governor, The Panama Canal.
President, Panama Railroad Company.

Acting District Quartermaster at Pedro Miguel.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 30, 1920.

To all concerned—Effective November 1, and continuing during the absence on leave of Mr. C. Peters, Mr. Max Herz will be in charge of Pedro Miguel district as acting district quartermaster.

R. K. MORRIS,
Chief Quartermaster.

Sale of Steam Launch.

Sealed bids will be received at the office of the District Engineer, U. S. Army, Balboa Heights, C. Z., until 2 o'clock p. m., on Wednesday, December 1, 1920, and then publicly opened, for the purchase of:

One boat, steam, oil-burning, length 80 feet, beam 12 feet 5 inches, draft 3 feet 5 inches, tonnage 47 tons gross, single-screw accommodations; now known as *Stinger*.

No detailed description was received with launch; however, from inspection the following has been determined:

The boat is equipped with Herreshoff water tube boiler, fitted for fuel oil burning; triple expansion engine, approximate cylinder dimensions 8" x 11½" x 18½" with 13" stroke, fitted with keel condenser; auxiliary, direct-connected dynamo to vertical steam engine, also gear connected to fuel oil pumps, feed pumps, air pumps, etc.; 2 independent pumps (1 fire, 1 auxiliary); steam-driven fan engine; speed about 18 knots; wooden bottom, not sheathed.

Boat is now tied up in Gatun Lake, near Gamboa (on west bank), where it may be inspected.

Bids must be submitted in duplicate in a plain sealed envelope addressed to "District Engineer, U. S. Army, Balboa Heights, C. Z.," marked "Bids for Launch." Complete payment must be made within 10 days from date of award of bid. Bids must be accompanied by certified check (or cash) in the sum of 10 per cent of amount of bid as guarantee of good faith.

The District Engineer reserves the right to reject any or all bids.

Forms for bid furnished on application to District Engineer, Balboa Heights.

Additions to Commissary Stock.

Dry Goods Section.

Covers, printed hemmed cotton, 36" x 36", ea.	$0.54
Lace footing, cotton net, pleated, 2", yd.	.25
Lace footing, cotton net, pleated, 2½", yd.	.22
Shirting, cotton, 31½", yd.	.88
Shirting, cotton and silk, 31½", yd.	.70

MOVEMENTS OF OCEAN VESSELS.—Continued from page 179.

PORT OF CRISTOBAL—continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Nov. 4	St. Minver[7]	British Government	Southampton.
Nov. 4	Abangarez	United Fruit Co.	New Orleans and wayports.
Nov. 4	Caribbean	Panama Railroad Cattle Industry.	Cartagena.
Nov. 4	St. Catherine[7]	British Government	Leith.
Nov. 4	St. Giles[7]	British Government	Leith.
Nov. 5	Eagle No. 4[16]	United States Navy	Port Limon, C. R.
Nov. 6			

[16] Subtender. [17] U. S. Army transport. [18] And barge *Mamei*.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Nov. 1	Santa Leonora[17]	United States Army	New Orleans.
Nov. 3	Achilles[16]	Panama Railroad Steamship Line.	Norfolk.
Nov. 3	Ulua	United Fruit Co.	Port Limon.
Nov. 4	Abangarez	United Fruit Co.	New Orleans.
Nov. 4	Parismina	United Fruit Co.	N. O. via Bocas, Habana.
Nov. 5	Gen. W. C. Gorgas	Panama Railroad Steamship Line.	New York via Haiti.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—
Oct. 31	S. V. Harkness[19]	Standard Oil Co.	High seas.
Nov. 4	Anyo Maru	Toyo Kisen Kaisha	Hongkong.
Nov. 4	Laura C. Hall[8]	Pacific Metals Corporation	Buenaventura.

Date.	Vessel.	Line.	For—
Nov. 4	S. V. Harkness	Standard Oil Co.	Pisagua.

*Other than ships passing through the Canal.

[19] Returned for repairs.

Locations of Patients, and Visiting Hours, at Ancon Hospital.

The following table shows the distribution of patients in the new Ancon Hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Present number of beds.	Visiting hours.
Section "A"—White American, male:		Tuesdays, Thursdays, and Saturdays, 2 to 4.30 p. m. and 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11 a. m. and 2.30 to 4.30 p. m.
Ward No. 1, Medical Eye and Ear	44	
Ward No. 2, Medical, Eye and Ear	41	
Ward No. 3, Surgical	44	
Ward No. 4, Surgical	41	
Cells (2)	2	
	172	
Section "B":		
White American, female	23	Daily except Sunday, 2 to 4.30 p. m.; 6.30 to 8 p. m. Sundays and holidays, 10 to 11 a. m.; 2 to 4.30 p. m. 6.30 to 8 p. m.
White foreign, female	15	
Nursery	16	No visitors permitted.
Private rooms (40)	46	Daily, 9.30 to 11 a. m.; 2 to 4.30 p. m.; 6.30 to 8 p. m.
Cells (2)	2	
	102	
Section "C":		
Ward No. 9, White foreign, male	39	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 10, Colored, eye and ear, convalescent medical	39	
Ward No. 11, Colored Acute surgical	39	
Ward No. 12, Colored Acute medical	39	
Ward No. 13, Colored Convalescent surgical	39	
Ward No. 14, Colored Convalescent surgical	39	
Cells (6)	6	
Rooms (7)	7	
	247	
Section "D":		
Ward No. 15	41	
Ward No. 16	39	
Ward No. 17, Colored children	32	Wednesdays, Sundays and holidays, 1.30 to 3 p. m.
Ward No. 18, White children	30	Daily, 9.30 to 10 a. m.; 2 to 4 p. m.
Ward No. 19, Colored female medical	41	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 20, Colored female surgical	34	
Rooms (6)	6	
Cells (6)	6	
	229	
Isolation:		No visitors permitted.
Floor No. 1	14	
Floor No. 2	29	
Floor No. 3	28	
Floor No. 4	28	
	99	
Total number of beds	849	

Emergency passes are issued only by and in the discretion of the section nurse.

COMMISSARY NOTES.

Books.

Books received:

"My Uncle Benjamin," by Claude Tillier; "The Sandman's Mountain," by Louise Dodge.

Wax.

A new item, ironing wax, manufactured by the Commissary Division, is now on sale in the retail stores at 17 cents the package.

Table Covers.

A shipment of art table covers, suitable for porch use, has just been received and distributed to the line stores. These covers come in 6 different designs and shades, and are very reasonably priced.

Silk Shirtings.

Silk striped shirtings in a variety of patterns are now available in the retail stores, a shipment recently having been received. Only a small lot was to be had which will probably sell out quickly.

Chinaware.

A shipment of Royal Doultonware in blue Watteau and the hunting and coaching designs has just been received and sent to the retail stores. Among the items are teapots, sugar bowls, cream jugs, beakers, vegetable dishes, punch bowls, rose bowls, plates, fruit stands, and cups and saucers.

In the floral blue pattern, cups and saucers and three sizes of plates were received, and there are also several miscellaneous items in various designs.

Baskets.

Values of more than ordinary appeal are to be found in the trimmed baskets on sale in the commissaries this week. The fancy sewing baskets are particularly attractive and are excellent examples of the best Chinese handiwork. These come in coarse, medium, and fine weaves, being round or oval in shape and ranging in size from very small ones to 37 inches in circumference. The ornamentation is unusual as well as artistic and the prices at which the baskets are offered, from 45 cents to $3.70, are below what would be asked for similar articles in commercial establishments in the United States.

Waste baskets from the Orient, dark cherry in color, are distinctive in appearance. They come in 6 sizes and retail at 75 cents, 90 cents, $1.10, $1.25, $1.45 and $1.65.

Toys, etc.

Toys, juvenile books, and games will be placed on sale in 5 districts on Monday, November 15. The sale at Balboa will be held in the Commissary, while in the Ancon district the toys will be sold on the second floor of the old Administration Building. At Cristobal the Christmas lines for children will be sold in the warehouse in the rear of the commissary, the most convenient entrance to which is from 11th Street through the vacant lot between the rear of the store and the Masonic Temple. The sale at Gatun will be held in the building formerly used as a carpenter shop, opposite the post office. In the Pedro Miguel district the sale will be held in the warehouse at Red Tank commissary, the same as last year.

The assortment of toys this year is thought to compare favorably with any heretofore received, and there is probably a greater variety from which to make selection. Dolls have just been received and will be placed on sale, probably, within the next week.

Christmas Gifts.

Owing to limitation of space it is necessary to place on sale at once shipments of merchandise for the holiday season, the first of which, consisting of imitation ivory, may now be obtained at Ancon, Balboa, Cristobal, Gatun, and Pedro Miguel commissaries. Among the items which will make desirable Christmas gifts are the following and other articles, all of which are individually boxed:

Hairbrushes, $1 to $5.10
Ladies' combs, $1 to $1.75
Hand mirrors, $2.75 and $5.80
Hair receivers, $1.55 and $2.90
Puff boxes, $1.55 and $2.90
Nail files, 58c. and 95c.
Nail polishers, $1.45, $2.20, and $2.75
Jewelry boxes, $5.10 and $6.20
Infant sets, $2.55 and $3.45
Cuticle knives, 95c.
Manicure scissors, $1.45
Shoehorns, 44c. and $1.80
Pin trays, in various sizes, 44c. to $4
Picture frames, $1.45 to $2
Pincushions, $1.30 to $1.90
Hatpin holders, $1.55
Bud vases, $1.30
Handkerchief boxes, special value, at $10.90
Soap boxes, $1 and $1.60
Whisk broom holders, 73c.
Inkwells, $2.20
Stamp boxes, $2.20
Blotter holders, $1.30
Desk calendars, $1
Blotter pads, $3.65
Penholders, 65c.
Paper cutters, 87c.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Volume XIV. Balboa Heights, C. Z., November 17, 1920. No. 14.

New Record for Unloading Collier.

Twelve thousand and thirty tons of coal were discharged from the collier *Ulysses* at the Cristobal coaling plant of The Panama Canal in 15 hours and 25 minutes on November 12-13. The collier docked at 8.50 a. m., November 12; unloading was begun at 8.55 a. m.; at 12.20 a. m., November 13, the cargo of 12,030 tons had been completely discharged, the ship cleaned up and all men were off. Cleaning up and taking the men off usually requires about an hour.

The discharge was effected by means of the 4 unloaders of the plant, equipped with four 2½-ton clamshell buckets. Four unloaders worked from the beginning until 3 p. m., 3 continued from that hour until 11 p. m., when 2 were discontinued, and the unloading was completed with the use of 1 unloader.

About 6 hours of the work was performed after dark. The new record beats the previous record for discharging the collier at this plant by 6 hours and 10 minutes. The work was rushed in order to allow the ship to return with minimum delay to Newport News for another cargo, as in the present shortage of coal every effort is being made to increase the stock of bunkers.

Largest Cargo of Wheat Through the Canal.

The steamship *Friesland*, a former German vessel now owned by the British Shipping Controller and operated by Glen & Company, passed through the Canal on November 8, bound from Seattle to Avonmouth with a cargo of 13,516 long tons of wheat. This is the largest cargo of wheat ever carried through the Canal, and is reported by the Seattle Chamber of Commerce to be the largest cargo of grain ever put aboard one vessel in a Pacific Coast port. It amounts to 488,320 bushels, reckoning a bushel at 62 pounds. With wheat at $2.10 a bushel its value is $1,025,451.

The *Friesland* is a vessel of 12,321 gross and 8,690 net tons, 520.7 feet in length by 64.2 feet beam, and was drawing 30.4 feet in salt water at time of transit.

The "Alloway" Carries Variety of Oriental Products.

Two hundred and eighty-two tons of firecrackers were included in the 7,448 tons of general cargo on the Barber Line steamer *Alloway*, passing through the Canal on November 3, bound for Boston from Shanghai, Hongkong, and Manila. Albumen, pig bristles, duck feathers, human hair and horse tails, pig intestines, gallstones, leather, lumber, scrap railroad material, wolfram, woven hats, rattan core, raw skins and hides, sugar, egg yolk, fox tails, and furniture were other items listed on the cargo declaration.

The Barber Lines maintain an extensive service to the Far East, sending 7 or 8 ships through the Canal per month.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, November 13, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Eastern Sailor	6	16.13	7	6.14	7	13.40	7	17.00	American	Williams Dimond & Co. (S. B.)	415.0	55.7	18.0	Alexandria	San Francisco			7,704	5,707
Esther Dollar	6	11.37	7	6.35	7	15.02	7	15.47	American	Robert Dollar Steamship Co	483.0	57.0	27.3	New York	Vancouver	General	10,000	9,856	7,133
Opawa	6	15.04	7	6.40	7	14.10	7	15.15	British	New Zealand Shipping Co	460.0	60.0	31.0	Liverpool	Dunedin	General	8,208	9,967	6,936
Kathlamba	6	17.25	7	6.47	7	15.29	8	21.24	British	Ellerman & Bucknall	434.0	57.0	24.0	New York	Auckland	General	6,714	8,114	6,322
Talabot	7	12.25	7	12.55	7	21.15	7	22.20	Norwegian	N. S. Bjonness	411.0	56.0	31.0	Norfolk	Mejillones	Coal	9,321	8,279	6,328
Tuscan Prince	7	14.52	8	6.37	8	14.15	8	15.25	British	Prince Line, Ltd	435.0	54.0	24.6	New York	Shanghai	General	7,700	6,747	5,029
Paita	7	14.57	8	6.40	8	15.06	8	16.30	Peruvian	Peruvian Line	387.0	48.0	24.6	Liverpool	Callao	General	4,762	4,867	3,544
Olaf Maersk	7	14.58	8	6.45	8	16.00	8	17.00	Danish	A. P. Moller	280.0	40.0	18.6	Norfolk	Mollendo	Briquettes	2,735	2,213	1,527
Ancon	2	19.45	8	7.30	8	15.40	8	16.30	American	Panama Railroad Steamship Line	489.5	58.0	19.0	Norfolk	Antofagasta			10,157	7,689
Bachi	8	7.15	8	11.30	8	18.32	8	19.50	Spanish	Cia. Naviera Bachi	331.2	46.0	21.6	Savannah	Mejillones	Coal	4,443	3,470	2,121
San Jose	4	19.50	9	6.05	9	14.37	9	17.22	American	Pacific Mail Steamship Co	283.0	37.0	18.6	Cristobal	San Francisco	General	1,789	2,352	1,602
D. G. Schofield	8	15.00	9	6.13	9	13.30	9	16.23	American	Standard Oil Co	439.0	58.0	26.6	Tampico	San Francisco	Naphtha oil	9,000	8,912	6,254
Ansaldo San Giorgio II	8	12.52	9	6.18	9	14.40	10	7.30	Italian	Societe Nat. di Navigazione	391.7	51.0	14.1	Genoa	Valparaiso	General	1,770	5,886	4,289
Bakersfield	9	2.53	9	7.39	9	14.53	9	15.55	American	Williams Dimond & Co. (S. B.)	410.5	54.3	17.0	Alexandria	San Francisco	General	896	6,593	4,924
Hvidehavet	9	8.07	9	9.37	9	16.46	9	17.52	Danish	Atlanter Lavet Steamship Co	324.2	48.7	20.0	Newport News	Callao	Coal	4,020	3,457	2,381
Strinda	9	7.32	9	10.15	9	18.17	9	19.40	Norwegian	Mowinckel Steamship Co	439.5	57.0	24.0	New York	Coronel	General	8,660	7,411	5,066
Lake Maurepas	9	7.35	9	12.40	9	20.35	10	0.43	American	Wessel Duval & Co. (S. B.)	253.6	43.3	20.6	Norfolk	Chile	Coal	2,344½	2,383	1,517
Gen. G. W. Goethals	5	6.29	9	12.56	9	19.30	10	7.30	American	Panama Railroad Steamship Line	353.0	48.7	20.6	New York	Buenaventura	General	914	5,125	3,564
Santa Luisa	9	20.15	10	6.00	10	13.22	10	14.25	American	W. R. Grace & Co	360.0	51.6	23.5	New York	Valparaiso	General	3,090	5,694	3,975
Salvador	4	13.30	10	6.06	10	13.51	10	17.03	British	Pacific Steam Navigation Co	207.7	33.0	14.9	Cristobal	Champerico	General	997	1,213	692
Amazon Maru	9	18.50	10	6.08	10	15.00	10	17.10	Japanese	Osaka Shosen Kaisha	425.0	56.0	27.6	New York	Singapore	General	7,519	7,901	5,629
Manavi	10-14	17.00	10	8.35	10	15.44	10	16.40	British	Pacific Steam Navigation Co	216.1	35.1	12.6	Cristobal	Guayaquil	General	315	1,357	884
Haxtum	11	7.22	11	7.00	11	14.11	11	22.58	American	McCormick & McPherson (S. B.)	402.5	53.0	15.0	Glasgow	San Francisco			6,525	4,748
Cordelia	12	4.55	12	6.41	12	15.06	12	19.20	British	C. T. Bowring & Co	420.3	54.0	27.0	Tampico	Tocopilla	Fuel oil	5,600	6,690	4,963
San Joaquin	12	6.16	12	6.56	12	15.21	12	18.06	Norwegian	W. Wilhelmsen	425.0	58.0	27.0	Tampico	Antofagasta	Crude oil	9,300	7,059	5,076
Quillwark	12	7.00	12	7.43	12	16.24	12	21.00	American	E. C. Evans & Sons (S. B.)	493.0	53.0	27.0	Newport News	San Diego	Coal	8,171	6,582	4,882
Jamaica	8	17.30	12	11.21	12	17.52	12	20.30	British	Pacific Steam Navigation Co	220.0	34.0	12.6	Cristobal	Tumaco	General	768	1,187	622
Delagoa Maru	12	11.40	12	12.00	12	19.00	13	0.45	Japanese	Nippon Yusen Kabushiki Kaisha	420.0	56.0	28.0	Philadelphia	Manila	Kerosene	7,337	7,249	5,171
Pedro Christophersen[1]	12	12.14	13	6.15	13	14.05	13	23.15	Swedish	Johnson Steamship Line	362.0	51.6	17.6	Stockholm	Talcahuano	General	1,658	5,081	4,013
General Getty[2]			13	6.15	13	13.50			American	United States Army				Cristobal	Balboa				
Ellen[3]	1	19.35	13	7.00	13				Panaman	H. L. Kierulff	43.0	12.8	3.0	Colon	Balboa			17	14
Point Judith	11	10.50	13	8.00	13	14.53	13	20.40	American	Pacific Mail Steamship Co	289.0	44.0	17.6	Baltimore	San Francisco	General	2,400	2,895	1,982
Hororata	13	6.50	13	12.59	13		13	21.30	British	New Zealand Shipping Co	511.0	64.0	30.0	New York	Auckland	General	6,664	12,623	8,598

[1] Motor ship. [2] Tug. [3] Launch.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Mahana	7	0.30	7	8.08	7	16.05	8	6.59	British	Shaw Savill & Albion Co.	500.9	63.3	27.0	Wellington	London	Frozen, general	6,494½	12,151	8,727
Point Adams	6	18.18	7	2.06	7	21.15	8	20.55	American	Pacific Mail Steamship Co.	289.0	44.1	19.5	San Francisco	Baltimore	General	3,157	2,899	1,971
Ebro	7	13.30	7	15.00	7	21.40	9	2.55	British	Pacific Steam Navigation Co.	450.3	57.8	26.0	Valparaiso	New York	General	2,149	9,089	6,215
Iris	6	6.30	8	6.45	8	14.28	8	20.20	American	Swayne & Hoyt	304.3	38.8	21.0	San Francisco	New York	Lumber, general	(6)	3,030	2,021
Cristobal	7	15.20	8	6.58	8	15.33	8	17.05	American	Panama Railroad Steamship Line	489.5	58.0	28.0	Mejillones	Pensacola	Nitrate of soda	9,529	10,475	7,954
Kronprinsessan Margareta[4]	7	14.38	8	8.09	8	15.25	8	15.25	Swedish	H. Johnson	360.2	51.4	23.0	San Francisco	Stockholm	General	5,383	5,296	3,967
Friesland	8	3.00	8	8.25	8	16.25	8	20.20	British	Shipping Controller	520.7	64.2	30.4	Seattle	Avonmouth	Wheat	[3]3,516	12,321	8,690
Consuelo	8	2.00	8	9.34	8	18.20	9	11.55	Spanish	Ricardo Ortiz	342.2	46.6	23.0	Caleta Buena	Hampton R'ds	Nitrates	[5]5,700	3,879	2,868
Jamaica	7	20.30	8	9.35	8	17.30	12	11.21	British	Pacific Steam Navigation Co.	220.0	34.0	13.2	Tumaco	Cristobal	General	703	1,187	622
Grace Dollar	8	9.05	8	10.00	8	19.45	9	6.24	British	Canadian Robt. Dollar Line	412.4	55.8	28.0	Singapore	New York	General, lumber	[5]8,700	7,118	5,177
Ucayali	8	7.30	8	11.24	8	19.05	....	.....	Peruvian	Peruvian Steamship Co.	374.7	46.3	21.6	Callao	Cristobal	General	[5]2,457	4,466	2,405
West Katan	8	10.00	8	11.35	8	19.40	9	4.45	American	Williams Dimond & Co. (S. B.)	410.5	54.3	23.0	San Francisco	Hull	Lumber, general	5,683	6,573	4,901
Shortsville	8	10.05	8	12.08	8	20.20	8	20.22	American	Luckenbach Steamship Co. (S. B.)	324.0	46.2	21.6	San Francisco	New York	General	[5]2,604	3,959	2,628
Cape Romaine	8	17.25	9	7.04	9	14.35	10	23.17	American	Atlantic, Gulf & Pacific Corp.	376.4	52.3	20.0	San Francisco	Philadelphia	General	3,600	5,142	3,568
Northumberland	8	19.00	9	8.05	9	16.05	9	18.35	British	Federal Steam Navigation Co.	530.5	63.0	26.7	Wellington	Boston	Meat and wool	[5]6,650	12,821	8,700
Witram	8	19.30	9	8.28	9	17.15	10	1.25	British	Shipping Controller	438.9	57.2	25.0	Portland	United King.	Wheat	[5]8,269	7,461	5,085
Ayaha Maru	9	7.50	9	9.38	9	17.50	10	6.25	Japanese	Tatsuma Kisen Kaisha	400.0	54.5	24.0	Samaran, Java	New York	Sugar	[5]7,100	5,788	4,116
Laura C. Hall[1]	4	20.25	9	12.23	9	19.25	....	.....	British	Pacific Metals Corp.	81.0	25.6	10.0	Buenaventura	Cristobal	Ballast	.....	130	69
Vixon[3]	8	21.00	9	9.00	....	.....	....	.....	American	M. R. Wisner	18.0	5.0	1.6	Taboga Island	Pedro Miguel	.....	.....	.....	.....
Renaico	9	16.45	10	6.40	10	13.45	11	9.00	Chilean	South American Steamship Co.	412.0	50.5	25.6	Talcahuano	New York	General	2,798	6,050	3,442
Peru[1]	9	18.00	10	7.46	10	14.48	10	16.55	Danish	East Asiatic Co.	425.3	55.2	28.5	San Francisco	Copenhagen	General	9,150	7,407	5,660
Port Darwin	9	17.30	10	8.01	10	15.25	10	18.40	British	Commonwealth and Dom. Line	480.4	60.3	26.1	Melbourne	London	General, frozen	8,107	10,530	7,968
California	9	22.45	10	8.20	10	16.00	10	17.16	Danish	United Steamship Co.	405.4	54.2	26.0	Antofagasta	New York	Nitrate, copper	[7]7,704	6,707	4,934
Maricopa	10	0.01	10	8.36	10	16.22	10	19.35	Norwegian	W. Wilhelmsen	425.2	57.0	19.0	Tocopilla	Tampico	Ballast	.....	6,996	5,108
Heber	8	14.00	10	12.13	10	22.47	10	22.47	American	McCormick & McPherson (S.B.)	402.4	53.0	26.6	Portland	Rotterdam	Wheat	7,389	.....	.....
Santa Ana	10	18.00	11	6.39	11	13.15	11	14.05	American	W. R. Grace & Co.	360.2	51.6	25.0	Valparaiso	New York	(1)	4,271	5,842	4,150
Cauca	11	5.00	11	8.01	11	14.35	....	.....	British	Pacific Steam Navigation Co.	246.0	35.2	16.2	Guayaquil	Cristobal	General	1,132	1,582	1,023
Uncas	2	16.50	11	14.03	11	20.35	12	12.43	British	Standard Transportation Co.	375.0	51.2	19.6	San Pedro	Tampico	Ballast	.....	.....	.....
Florence Olson	11	13.45	11	14.28	11	21.45	12	1.12	American	Oliver J. Olson	213.7	42.0	20.8	St. Helens	Santo Domingo	Lumber, ties	2,211	1,381	635
Athenic	11	15.20	12	6.38	12	15.28	14	16.12	British	White Star Line	500.3	63.3	26.6	Wellington	London	(5)	4,338	12,877	9,587
Victoria	11	22.00	12	7.43	12	15.48	....	.....	British	Pacific Steam Navigation Co.	401.4	52.3	19.0	Talcahuano	Liverpool	General	1,990	6,887	4,575
Coalinga	12	20.30	13	7.47	13	14.40	13	19.00	American	Union Oil Co.	471.0	55.0	19.0	Antofagasta	Tampico	Ballast	.....	8,108	5,877
Waimana	13	4.45	13	8.10	13	16.30	13	18.05	British	Shaw Savill & Albion Co.	477.6	63.1	29.6	Lyttleton	London	Frozen, general	7,110	11,229	8,252
Huasco	13	4.30	13	8.22	13	16.44	....	.....	Chilean	South American Steamship Co.	379.7	44.3	19.0	Valparaiso	Cristobal	General	730	4,552	3,182
Navarra	13	12.35	13	13.36	13	21.20	14	6.34	Spanish	Cia Naviera Mandaca	340.0	41.1	23.0	Iquique	Santander	Nitrates	[7]3,770	3,256	2,102
Fairhaven	13	13.10	13	14.20	13	21.45	....	.....	American	Fairhaven Steamship Co.	185.5	38.0	18.0	Puntarenas	Cristobal	Hardwood, etc.	599	1,164	742

[4] Nitrate, sugar, quillay, and general. [5] Mutton, beef, wool, and tallow. [6] Lumber, 542,000 feet B. M.; general, 1,640 short tons. [7] Long tons.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Nov. 7	St. Aristo[2]	British Government	Saint Lucia.
Nov. 7	Ulua	United Fruit Co.	Port Limon.
Nov. 8	St. Erith[2]	British Government	Leith.
Nov. 8	Colon	Panama Railroad Steamship Line	New York via Habana.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Nov. 7	Ulua	United Fruit Co.	New York via Habana.
Nov. 8	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Nov. 9	St. Minver[2]	British Government	Kingston.
Nov. 10	Oranje Nassau	Royal Netherlands West India Mail	Cartagena.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

(Continued on page 195, Column 2.)

Transits of Vessels in the Holland-American Line's West Coast Service.

The steamship *Eemdijk* of the Holland-American Line, which passed through the Canal on September 8 on the way from Rotterdam to Vancouver, beginning the line's service between Europe and the west coast of North America, returned to the Canal on October 31 with 8,300 tons of general cargo, including a quantity of fresh fruits in cold storage. The *Kinderdijk*, which made the transit from Atlantic to Pacific on September 25, is expected shortly on her return voyage. The *Moerdijk* passed through the Canal on November 5, bound from London to San Francisco.

These 3 steamers will maintain a 3-weekly service in conjunction with 3 steamers of the Royal Mail Steam Packet Company, between northern Europe and north-Pacific ports of the United States and Canada.

American-Hawaiian Line Resumes Coastwise Service.

The American-Hawaiian Steamship Company, operating under the direction of the United American Lines, Inc., has resumed its United States coastwise service through the Canal. The steamship *Hawaiian* passed through the Canal on October 20, and the *Oregonian* on November 3, bound from New York to Los Angeles, San Francisco, Portland, Seattle, and Tacoma. Later sailings scheduled from New York are the *Sudbury*, November 9, the *Effingham* on November 16, and the *Mexican* on November 23. The service is designated the "Panama Canal Line."

The American-Hawaiian Line was one of the first regular services using the Canal. Its first vessel went through on August 16, 1914, the day after the opening of the Canal to commercial traffic; and in the first 2 months, 24 of its ships made the transit, carrying 175,753 tons of cargo. In the fiscal year ending June 30, 1915, when the United States coastwise traffic amounted to 30.7 per cent of the aggregate traffic, with respect to vessels, carrying 37.1 per cent of the total cargo, the American-Hawaiian Line was the principal patron of the Canal. Later, with the closing of the Canal by slides from September, 1915, to April 15, 1916, and the development of the demand for tonnage in war service, the American-Hawaiian Line vessels were diverted to the nitrate and trans-Atlantic routes, and the coastwise service was abandoned. The advertised schedule of sailings indicates that the service will be restored to its former frequency.

The "Cape Fear" Sunk in Narragansett Bay.

The concrete ship *Cape Fear*, which underwent hull repairs at Cristobal shops in March, 1920, when a cofferdam was built around the small section of hull which had been damaged by a collision, is reported to have been sunk in Narragansett Bay, off Newport, R. I., on October 29, as a result of a collision with the steel steamship *City of Atlanta*, of 5,433 gross tons. Seventeen men of the crew of the *Cape Fear* were lost. Press reports state that the vessel was struck amidships, almost cut in two, and sank in 3 minutes.

An account of the repairing of the *Cape Fear* at Cristobal was published in THE PANAMA CANAL RECORD of March 24, 1920. She made 2 transits of the Canal, south in ballast on March 20, after delivering 2,878 tons of coal at Cristobal, and north on April 20, with 3,000 tons of nitrate. She belonged to the United States Shipping Board.

Coastwise Line from Newark.

The Transmarine Corporation of Newark, N. J., has advised The Panama Canal that it "will in the near future have several vessels plying between Port Newark, N. J., and the Pacific Coast" through the Canal.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended November 13:

Barge *No. 131*, general repairs; steamship *Marne*, general repairs and rebuilding; dredge *No. 83*, general repairs; launch *Captain Wilhelm*, hull repairs and installation of new engine; steamship *General Hodges*, general repairs; barge *No. 66*, general repairs; tug *Bohio*, general repairs; steamships *Uncas*, welding cracked H. P. astern column and slipper; *Ansaldo San Giorgio IV*, installation of 2 new feed pumps, repairs to steering rod and calking bridge; launches *Limon*, general overhauling; *Captain C. D. Harris*, repairs to engine; steamships *Waukegan*, repairs to refrigerating machine compressor; *Heber*, miscellaneous small repairs.

The following vessels were at the Cristobal shops for repairs during the week ending November 15:

Steamships *Colon* and *Ulysses*, miscellaneous repairs and painting to engine, deck, and steward departments; *Lake Flynus*, remove dents in hull, renew loose rivets; clean and paint; repair feed pump, lifeboat, tanks, etc.; *Jamaica*, clean and paint hull, repair windlass; tug *St. Blazey*, calk decks, repair boiler, capstan, sanitary pump, etc.; steamship *Ucayali*, electric weld hawse pipe, hatch coaming, etc.; tugs *St. Aristell*, repair steering engine, piping, etc., make awnings; *Tavernilla*, install new uptakes, bitts, and L. P. cylinder ring; repair pumps, towing machine, circulating engine, etc.; steamships *Osaqumsick*, repair telemotor and circulating engine; *Lake Elkwater*, repair boiler, install fitting in blower pipe; S. P. *No. 2232*, general overhaul and alterations; launch *Pequeni*, overhaul both engines; U. S. S. C. *No. 285*, overhaul main and auxiliary engines; tug *St. Giles*, steamship *Cartago*, launch *Activo*, tug *St. Kyne*, steamships *Puerto Rico*, *Caribbean*, *Cape Romain*, *Athenic*, *Victoria*, *Honduras*, and *Arzilla*, minor repairs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending November 13, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Ulua	United Fruit Co	November 7	November 7	74	(2)
Caribbean	Panama Railroad Cattle Industry		November 7		1
Point Adams	Pacific Mail Steamship Co	November 7	November 8	413	(3)
San Jose	Pacific Mail Steamship Co		November 9		1,887
Ebro	Pacific Steam Navigation Co	November 8	November 9	5	1,200
Ansaldo San Giorgio II	Italian National & Transatlantic Co	November 8	November 9	52	(3)
Gen. Geo. W. Goethals	Panama Railroad Steamship Line		November 10		25½
Cartago	United Fruit Co	November 8	November 11	657	413
Jamaica	Pacific Steam Navigation Co	November 8	November 12	703	768
Colon	Panama Railroad Steamship Line	November 8		1,829	
Ucayali	Peruvian Line	November 8		2,457	
Manavi	Pacific Steam Navigation Co		November 10		314
Salvador	Pacific Steam Navigation Co		November 10		932
Ottar	Caribbean Steamship Co	November 9	November 10	405	(3)
Oranje Nassau	Royal Netherlands W. I. Mail Co	November 9	November 10	45	510
Toloa	United Fruit Co	November 9	November 10	663	½
Laura C. Hall	Pacific Metals Corporation	November 9		2½	
Cape Romain	Atlantic Gulf and Pacific Corp	November 9	November 10	(1)	1,870
Atenas	United Fruit Co	November 10	November 10	8	14
Carrillo	United Fruit Co	November 10	November 11	10	83
Renaico	Chilean Steamship Co	November 10	November 11	16	139
Cauca	Pacific Steam Navigation Co	November 11		1,132	
Caribbean	Panama Railroad Cattle Industry	November 11		400	
Point Judith	Pacific Mail Steamship Line	November 11	November 13	233	329
Puerto Rico	French Line	November 11		239	
Pedro Christopherson	Johnson Line	November 12	November 13	119	(3)
Arzila	Pacific Steam Navigation Co	November 12		200	
Ulysses	Panama Railroad Steamship Line	November 12		12,030	
Honduras	French Line	November 13		210	
Fairhaven	Fairhaven Steamship Co	November 13		509	
Huasco	Chilean Steamship Co	November 13		695	

[1] No cargo discharged. [2] 355 pounds. [3] No cargo laded

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending November 13, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Point Adams	Pacific Mail Steamship Co.	November 6	November 7	99	.....
Jamaica	Pacific Steam Navigation Co.	November 7	November 8	2	.....
San Jose	Pacific Mail Steamship Co.	November 9	November 9	.....	5
Ansaldo San Giorgio II	Societa Nazionale de Navigazione	November 9	November 9	114	.....
Gen. Geo. W. Goethals	Panama Railroad Steamship Line	November 9	November 9	.....	1
Manavi	Pacific Steam Navigation Co.	November 10	November 10	.....	1
Salvador	Pacific Steam Navigation Co.	November 10	November 10	.....	2
Ansaldo San Giorgio IV	Societa Nazionale de Navigazione	November 10	.....	4	120
Santa Ana	W. R. Grace & Co.	November 10	November 11	.....	1
Cauca	Pacific Steam Navigation Co.	November 11	November 11	4	.....
Pedro Christopherson	Johnson Line	November 13	November 13	60	.....
Point Julith	Pacific Mail Steamship Co.	November 13	November 13	174	.....

The "Belen Quezada" Sold for $26,900.

An item on the proposed sale in Savannah of the motor schooner *Belen Quezada*, formerly registered in Panama, was published in THE PANAMA CANAL RECORD of September 8. Subsequent reports state that she was sold for $26,900. The low price is accounted for by the extent of repairs necessary to place the vessel in good condition.

Matson Line to Operate Passenger Service Through the Canal.

Announcement has been made that the Matson Navigation Company will begin in January, 1921, a cargo and passenger service from Baltimore to Los Angeles and San Francisco, thence to Honolulu, and return, operating the steamships *Hawkeye State* and *Buckeye State* over the course on a 35-day schedule.

Danger to Small Craft in the Chagres Below the Spillway.

On account of the frequent opening of the gates of the spillway of Gatun Lake at this time of the year, the public is warned against making trips in launches or smaller boats on the lower Chagres River, between the spillway and the mouth of the river at Fort San Lorenzo. Instructions have been issued in the Bureau of Clubs and Playgrounds to conduct no more such trips until the dry season.

Beekeepers' Association Organized.

The Panama Beekeepers' Association was organized at Balboa on November 3, at a meeting at which 22 beekeepers, owning 467 stands of bees, were present.

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings, or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Emilien Sidney	23656	Martinique	Camp Bierd	Coaling plant	October 16, 1920.
Joseph Lashley (*alias* Lesley)	52799	Antigua	Panama	Mechanical Division	October 23, 1920.
Walter B. Brown	3941	United States	Cristobal	Cattle Industry	November 4, 1920.
Thomas Rivers	55243	Trinidad	Colon	Commissary Division	November 10, 1920.

Official Circulars.

Supply Department.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., November 6, 1920.

CIRCULAR No. 660-51 (amending circulars Nos. 660-20 and 660-39):

1. The Supply Department will handle its own repair, alteration, and manufacturing work up to a cost of $150 for each job. Jobs that would naturally cost more than $150 must not be divided into separate items in order that they may be handled by that department.

2. Work requests covering jobs that will cost more than $75 must be submitted on form 159, the estimated cost being shown, and must be approved by the Chief Quartermaster.

3. Paragraph 1 of Circular No. 660-20, dated September 30, 1914, and paragraph 3, Section (*a*) Circular No. 660-39, dated October 8, 1917, are amended accordingly.

CHESTER HARDING,
Governor.

Holiday Train Schedule.

PANAMA RAILROAD COMPANY,
OFFICE OF MASTER OF TRANSPORTATION,
BALBOA HEIGHTS, C. Z., November 17, 1920.

CIRCULAR No. 1692:

To all concerned—On account of Thursday, November 25, being a legal holiday, the Panama Railroad will operate regular Saturday schedule, Wednesday, November 24, and regular Sunday schedule Thursday, November 25, on the main line and Las Cascadas branch.

Local freights will not run Thursday, November 25.

W. F. FOSTER,
Master of Transportation.

Approved:
S. W. HEALD,
Superintendent.

Misdirected Letters.

The following insufficiently addressed mail matter has been received in the office of the Director of Posts and may be obtained upon request of the addressee. Request can be made by calling telephone 182, Balboa:

Ames, Chas. D.
Barber, Geo. F.
Carstensen, Rev. J. A.
Chamberlain, Mrs. S. J.
Champino, Lieut. H.
Chelf, F. M.
Clark, D. C.
Collins, Mrs. Jas.
Collue, Thos.
De Agostini, R.
Doyle, Miss A. M.
Franco, Dr. J. P.
Graves, E. M., Box 156
Green, Geo.
Hanchett, Mrs. Fred
Ignaschak, Mrs. S. J.[1]
Jaramillo, Mrs. Clotilda P.
Jones, Harry
Martin, H. A.[2]
Mathison, S. E.[3]
Miley, Clement
McCullough, James F.
McInnis, John C.
Nicholson, Mrs. R. W.[2]
Richardson, Mrs., Box 182[1]
Riddick, Junius F.[1]
Roberts, Miss Lilly May
Robinson, Alberto
Rose, Mrs. J. P.[1]
Smith, Harry E.
Watson, Miss Bessie
Wilkinson, J. H.

[1] Paper. [2] Circular. [3] Package.

Sale of Typewriters.

Two model 3, 20-inch carriage, Underwood typewriters, Nos. 412 and 723, are available for sale at Balboa storehouse, and will be sold on basis of first satisfactory offer received.

R. K. MORRIS,
Chief Quartermaster.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 191.

PORT OF CRISTOBAL—continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Nov. 8	Lake Flynus	United States Shipping Board	Cienfuegos.
Nov. 8	Cartago	United Fruit Co.	New Orleans.
Nov. 9	Orange Nassau	Royal Netherlands West India Mail	Amsterdam.
Nov. 9	St. Keyne[1]	British Government	Newcastle-on-Tyne.
Nov. 9	Tolosa	United Fruit Co.	New York via Habana.
Nov. 9	Ottar	J. C. Knudsen	New York.
Nov. 9	St. Botolph[1]	British Government	Newcastle-on-Tyne.
Nov. 10	Atenas	United Fruit Co.	New Orleans via wayports.
Nov. 10	Carrillo	United Fruit Co.	New York via Kingston.
Nov. 11	Puerto Rico	French Line	Havre and wayports.
Nov. 11	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Nov. 12	Ulysses	Panama Railroad Steamship Line	Norfolk.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Nov. 10	Ottar	J. C. Knudsen	Cartagena.
Nov. 10	Tolosa	United Fruit Co.	Port Limon.
Nov. 10	Atenas	United Fruit Co.	New Orleans.
Nov. 11	Carrillo	United Fruit Co.	New York via Colombia, Jamaica, and Cuba.
Nov. 11	Cartago	United Fruit Co.	New Orleans via Bocas and Habana.
Nov. 12	St. Keyne[1]	British Government	Kingston.
Nov. 12	St. Botolph[1]	British Government	Kingston.
Nov. 13	St. Erith[1]	British Government	Kingston.
Nov. 13	St. Catherine	British Government	Kingston.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
None				Nov. 7	Anyo Maru	Toyo Kisen Kaisha	Valparaiso.

*Other than ships passing through the Canal.

COMMISSARY NOTES.

Thanksgiving Items.

A number of items of cold storage, ordered specially for the Thanksgiving trade, arrived on the steamship *Advance*, which docked this week. Among other receipts were walnuts and Brazil nuts.

Chinaware.

Fourteen casks of a well-known brand of chinaware made in the United States were recently received and distribution made to all commissaries. The items comprising this shipment are now offered for sale.

Collars.

There are available in the line stores collars in a certain range of sizes which will be sold for 11 cents. For men who wear large sizes this is an unusual opportunity to buy a stock sufficient to last for a long period, inasmuch as the price asked is less than half what is now charged for the popular run of sizes. These particular collars are available only in sizes 16, 16½, 17, 17½, 18, 18½, 19, 19½, and 20.

Dolls.

Dolls for the Christmas trade will be offered to the public at Ancon, Balboa, Cristobal, Gatun, and Pedro Miguel commissaries on Monday, November 22. Included in the shipment are novelty dolls whose attractiveness insures their immediate sale. These bear the names of "Miss Summertime," "Sleepy-Head," "Atlantic City Belle," and "Mickey," and in addition there are Pudgies and Kewpies of many different types. Besides these there are dressed dolls which would delight any child. These range in price from 68 cents to $5.40.

Needlework.

From a well-known manufacturer, the following articles, stamped ready to be embroidered, have been received and are now on sale at Ancon, Balboa, Cristobal, Gatun, and Pedro Miguel commissaries: Collar bags, telephone screens, combing capes, telephone pads, bread bags, necktie racks, pillow tops and backs, scarfs, laundry bags, necktie cases, workbags, overnight cases, shirt waists, breakfast coats, breakfast caps, baby sets, nightgowns, envelope combinations, bloomers, infant lawn dresses, pincushions, rompers, children's dresses, and other articles. Included in this line are many desirable Christmas gifts.

Pictures.

Pictures made by a new rotogravure process which admirably reproduces the work of the artist, will be offered to the public among the articles for the Christmas trade, to be placed on sale next week in the 5 large commissaries. Two volchrome prints "After the Storm," from the original painting by Charles Partridge Adams, and "The Oaks," after Marion Kavagnah Watchel, are almost certain to attract especial attention because of their desirability as gifts. They come in frames that enhance their beauty. Verses artistically printed on decorative backgrounds, in attractive gilt frames, also will be offered; and there are charming colored nursery and playroom prints, which may be purchased either unframed or in plain white molding, particularly suitable for tropical homes. The line is such as is offered in art gift shops and the better class department stores.

Books.

Books received:

"The Book of Chicago," by Robert Shackleton; "The House of Lynch," by Leonard Merrick.

The juvenile books stocked by the Commissary Division for the Christmas trade are far superior to anything ever shown here. Instead of cheap, highly colored picture books, crude in drawings and coarse in design and motive, the best obtainable selections in line, color, and poetic fancy have been purchased. These will be placed on sale in the toy sales sections at Ancon, Balboa, Cristobal, Gatun, and Pedro Miguel on Monday, November 22. Besides these, the retail stores are offering what the children call "books that sing." Each one contains stories, pictures, and three real phonograph records.

Exceedingly popular with commissary customers is Pearl L. Bailey's "Domestic Science—Principles and Application." Over 200 copies of this title have been sold in the retail stores within a comparatively brief period. There are still available a number of copies of this book, which has the endorsement of Superintendent Lang and is used as a reference work in the Canal Zone schools.

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Volume XIV. Balboa Heights, C. Z., November 24, 1920. No. 15.

Visit of Senator Harding and Party.

Senator Warren G. Harding, President-elect of the United States, arrived at Cristobal in the morning of November 23 from New Orleans accompanied by Mrs. Harding and a party of about 45. The party was met on the arrival of the vessel by Governor Harding of the Canal, accompanied by various officials of the Isthmus, and by a large throng of Canal employees and residents of Colon. The visitors have taken rooms at the Hotel Washington. On November 24 they are to take a trip over Gatun Locks and Dam, thence through the Canal to Pedro Miguel on a subchaser, and to Balboa on a special train. A public reception will be held at the Administration Building at Balboa Heights on Wednesday evening.

Quantities of Foodstuffs Carried by the Commissary Division.

With the increasing traffic through the Canal, the furnishing of foodstuffs, cold storage, and other commissary supplies from the plants operated by the Canal organization is increasingly important. In the fiscal year ending June 30, 1920, the value of the commissary supplies furnished to steamships was $1,119,852.93. In the preceding fiscal year the value was $836,931.79.

In this connection it is interesting to note the reserve stocks which are carried, sufficient to supply the local demand and the steamship trade for a period of 30 days. The following are representative items: Fresh fish, 10,000 pounds; lamb, 115 carcasses; mutton, 375 carcasses; veal, 135 carcasses; hogs, 700 carcasses; butter, 40,000 pounds; eggs, 75,000 dozen; potatoes, 400,000 pounds; cabbage, 100,000 pounds; onions, 75,000 pounds; turnips, 25,000 pounds; carrots, 16,000 pounds. Fresh beef can be supplied in practically unlimited quantity, from the reserve stock of 16,000 cattle on the Canal pastures and the regular shipments from Colombia. The bakery of the Commissary Division bakes about 360,000 loaves of bread and 23,000 rolls per month, and this output can be considerably increased on demand. Dried and canned foodstuffs of wide variety are carried in stock in proportion to the cold storage and vegetable staples.

License Tags for Private Automobiles.

The Chief of the Division of Civil Affairs advises that as the supply of 1920 automobile license tags for private automobiles, with a yellow background and black raised letters and numbers, numbered from 001 to 650, inclusive, is exhausted, it will be necessary to issue tags with a white background and black raised letters during the remainder of the present calendar year. These tags will be numbered from 505 to 550, inclusive.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, November 20, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
West Kedron	13	17.38	14	6.10	14	13.24	14	14.35	American	Williams, Dimond & Co. (S. B.)	410.5	54.0	17.0	Leith	San Francisco	Ballast		6,572	4,900
Curaca	13	7.00	14	6.20	14	14.43	14	15.53	British	New York & Pacific S. S. Co	403.0	52.9	27.5	Norfolk	Iquique	Coal, briquettes	6,600	6,804	4,897
Tremeadow	13	17.25	14	6.29	14	16.00	14	17.10	British	Hain Steamship Co	400.0	52.0	24.0	New York	Sydney	General	5,100	5,797	4,090
Nishmaha	13	16.18	14	6.30	14	15.01	16	14.31	American	U. S. & A. Line (S. B.)	401.0	53.2	25.7	New York	Melbourne	Case oil, general	6,220	6,611	4,794
Lake Elkwater	12	7.35	14	9.18	14	17.00	14	17.45	American	Amer. Metal Transport (S. B.)	253.4	43.6	24.6	Boston	Antofagasta	Coal	3,285	2,939	1,976
City of Bristol	14	22.20	15	6.48	15	13.49	15	15.35	British	Ellerman Hall Line	452.0	56.0	25.6	New York	Lyttleton	General	10,000	8,063	6,188
Bath[1]	14	15.55	15	13.10	15	19.55	17	13.09	American	United States Navy	329.2	46.2	26.0	Norfolk	Mare Island	Gen. (for navy)	3,200	3,945	2,564
Huasco	13	16.44	16	6.11	16	13.39	16	14.21	Chilean	South American Steamship Line	379.0	44.0	20.0	Cristobal	Valparaiso	General	386	4,552	3,182
Amalienborg	15	13.32	16	6.19	16	13.36	16	14.37	Danish	C. K. Hansen	320.3	47.2	22.0	Norfolk	Antofagasta	Coal	4,019	3,567	2,460
Cauca	11	14.35	16	6.23	16	12.32	16	17.00	British	Pacific Steam Navigation Co	246.0	35.2	14.6	Cristobal	Guayaquil	General	278	1,582	1,023
Osaqumsiek	13	12.55	16	9.47	16	17.02	16	18.10	American	Pacific Steamship Co. (S. B.)	401.9	53.1	17.0	Philadelphia	Seattle	Iron and steel	1,200	5,572	4,949
Fairhaven	13	21.45	16	12.40	16	19.28	16	20.25	American	Fairhaven Steamship Co	185.5	38.0	16.0	Cristobal	Puntarenas	Ballast		1,164	742
Sciota[2]			16	9.25	16	15.48			American	United States Navy				Coco Solo	Balboa				
Rio Gatun[3]	15	18.35	16	12.00	16	14.17			Panaman	A. R. Echardt				Cristobal	Gatun Lake	Unknown		8	8
Ucayali	8	19.05	17	9.10	17	16.11	18	2.58	Peruvian	Peruvian Line	371.0	46.0	18.3	Cristobal	Callao	General	825	4,466	2,405
Tamagel[1]	16	12.13	17	12.56	20	12.32	20	14.00	American	United States Navy	182.0	35.0	13.6	Guantanamo	San Diego				
Quillota	16	6.24	17	13.09	17	20.14	17	21.10	British	Pacific Steam Navigation Co	361.0	46.0	19.6	New York	Guayaquil	General	1,346	4,768	2,987
Australford	17	13.00	17	13.21	17	21.50	18	7.41	British	Commonwealth and Dom. Line	376.1	52.0	23.0	Port Arthur	Adelaide	Case oil	5,800	4,718	3,359
Honduras	13	7.57	18	6.15	18	13.52	18	14.50	French	French Steamship Line	405.0	51.6	18.0	Hamburg	Talcahuano	General	964	6,020	4,363
Fredk. Luckenbach	17	20.00	18	6.27	18	14.00	18	15.00	American	Luckenbach Steamship Line	317.5	40.2	22.0	New York	San Francisco	General	2,500	2,986	2,091
Gen. Graham[2]			15	8.15	15	13.49			American	United States Army				Cristobal	Balboa				
Eastern Ocean	19	1.39	19	6.50	19	14.04	19	15.00	American	McCormick & McPherson (S.B.)	385.0	51.0	18.6	New York	Los Angeles	General	1,486	6,224	4,465
Arzila	12	18.48	20	6.20	20	13.18	20	15.58	British	Royal Mail Steam Packet Co	285.0	41.3	19.2	London	Champerico	General	1,538	2,856	1,797
Laura C. Halls	9	19.25	20	6.20	20	13.53	21	10.15	British	Pacific Metals Corporation	81.0	25.0	9.0	Cristobal	Buenaventura	General	16	130	69
Dan J. Hanlon[6]	20	3.05	20	8.32	20	15.24			American	D. J. Hanlon	192.0	40.0	8.0	Brunswick, Ga	San Francisco				1,142

[1] Supply ship. [2] Tug. [3] Launch. [4] And barge. [5] Motor schooner. [6] Barge.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Margaret Coughlan	14	0.01	14	8.02	14	15.55	15	6.45	Canadian	Canadian-Western S. S. Co	411.5	54.1	23.0	Vancouver	Garston, Eng.	(7)	[9]7,140	6,624	4,999
Calcutta Maru	14	6.30	14	8.14	14	16.10	14	17.20	Japanese	Nippon Yusen Kaisha	400.0	54.5	17.6	Shanghai	New York	General	[9]4,400	5,790	4,183
Port Sydney	14	11.20	14	12.10	14	20.25	15	23.07	British	Commonwealth and Dom. Line	591.3	63.3	28.6	Wellington	London	(8)	8,570	11,857	8,947
Ansaldo San Giorgio IV	10	14.15	15	6.50	15	15.25	15	19.50	Italian	Societe Nazionale de Nav	377.0	51.0	24.0	Valparaiso	Genoa	Nitrate and sugar	6,500	5,545	3,530
Elder Branch	15	10.00	15	11.04	15	18.10	15	19.20	British	Nautilus Steam Shipping Co	380.3	49.7	23.4	Puntarenas	Liverpool	General	6,340	4,965	3,653
Kaisho Maru	15	10.15	15	11.23	15	18.40	15	21.50	Japanese	Katsuda Steamship Co	407.2	50.8	27.6	Valparaiso	Norfolk	Nitrates	7,701	6,108	4,565

[7] Douglas fir and railroad ties. [8] Frozen meat, cheese, and wool. [9] Long tons.

Isis	15	23.15	16	8.08	16	15.18	16	15.55	British	Philipps, Philipps & Co	476.6	62.4	28.0	Portland	London	Wheat	10,925	9,629	7,013
Kinderdijk	16	16.15	17	6.35	17	14.05	17	14.50	Dutch	Holland-American Line	469.5	58.2	25.6	Tacoma	Rotterdam	General	8,786	8,515	6,068
Wawalona	16	11.45	17	6.52	17	14.48	20	9.55	American	Pacific Steamship Co. (S. B.)	401.4	53.2	27.4	Portland	Cadiz, Spain	Flour	7,187	6,611	4,793
Orator	17	2.30	17	7.41	17	17.00	17	20.38	British	T. & J. Harrison	385.5	52.1	22.0	Vancouver	London	General, lumber	6,000	5,178	3,870
Cherry Branch	17	6.30	17	8.24	17	17.45	17	22.52	British	Nautilus Steam Shipping Co	400.0	51.9	24.6	Talcahuano	Liverpool	General	6,450	5,391	3,974
Cape May	17	18.30	18	6.30	18	13.44	18	13.44	American	Barber Line (S. B.)	415.0	53.7	23.0	Kobe	New York	General	4,500	7,060	4,870
Crisfield	17	16.00	18	6.47	18	14.17	18	18.00	American	American Metals Transp. Co (S.B)	402.6	54.8	18.0	Antofagasta	Hampton R'ds	Ballast	.....	6,932	5,100
Orani	17	20.08	18	7.45	18	15.32	18	18.02	American	Williams, Dimond Co. (S. B.)	401.9	53.2	24.0	San Francisco	London	General	7,000	6,577	4,954
Acajutla	18	2.30	18	8.01	18	14.48	....	.....	British	Pacific Steam Navigation Co	215.7	33.5	12.8	Champerico	Cristobal	Coffee, hides, etc	193	1,273	706
City of Para	18	18.00	19	6.28	19	13.22	....	.....	American	Pacific Mail Steamship Co	345.0	38.6	17.6	San Francisco	Cristobal	(11)	296	3,739	2,459
Lake Ellicott	15	7.30	19	12.17	19	20.10	20	2.00	American	N. O. & S. A.-S. S. Co. (S. B.)	253.0	43.0	23.6	Iquique	Wilmington	Nitrates	3,700	2,920	1,973
Onton	19	13.45	19	14.28	19	22.35	20	2.41	Spanish	Jose M. Urquijo & Co	310.0	42.9	21.0	Caleta Colosa	Colon [10]	Nitrates	4,220	2,849	2,061
Balboa	20	6.15	20	8.20	20	14.58	....	.....	American	Colombian Maritime Co	190 0	29.1	13.6	Buenaventura	Cristobal	(12)	603	741	350
Oropesa	20	10.00	20	11.18	20	19.15	21	6.15	British	Pacific Steam Navigation Co	530.0	66.3	26.5	Valparaiso	Liverpool	General	6,608	.....	.....
Matatua	20	11.30	20	12.50	20	20.08	20	22.40	British	Shaw Saville & Albion Co	448.0	56.5	23.5	Auckland	New York	Mutton, general	3,823	8,535	6,049

[10] For orders. [11] Merchandise, coffee, hides, and sugar. [12] Coffee, hides, rubber, hats, and nuts. Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
Nov. 14	Toloa	United Fruit Co	Port Limon.	Nov. 14	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Nov. 15	San Blas	United Fruit Co	Boston.	Nov. 14	Toloa	United Fruit Co	New York via Habana.
Nov. 15	Heredia	United Fruit Co	New Orleans.	Nov. 14	Colon	Panama Railroad Steamship Line	New York via Haiti.
Nov. 15	Nevisian	Leyland Line	Liverpool and wayports.	Nov. 14	Puerto Rico	French Line	Puerto Colombia.
Nov. 15	Allianca	Panama Railroad Steamship Line	New York via Haiti.	Nov. 14	Cape Romain	Atlantic Gulf & Pacific Co	Philadelphia.
Nov. 16	Calamares	United Fruit Co	New York via Habana.	Nov. 15	San Blas	United Fruit Co	Boston via Limon.
Nov. 17	Metapan	United Fruit Co	New Orleans via wayp'ts.	Nov. 16	Ulysses	Panama Railroad Steamship Line	Norfolk.
Nov. 17	Advance	Panama Railroad Steamship Line	New York via Haiti.	Nov. 17	Calamares	United Fruit Co	Port Limon.
Nov. 18	La Navarre	French Line	Saint Nazaire, wayports.	Nov. 17	Metapan	United Fruit Co	New Orleans.
Nov. 18	Caribbean	Panama Railroad Cattle Industry	Cartagena.	Nov. 17	Nevisian	Leyland Line	Houston.
.....	.....	.....	.....	Nov. 18	St. Giles [2]	British Government	Kingston.
.....	.....	.....	.....	Nov. 18	Heredia	United Fruit Co	N. O. via Bocas, Habana.
.....	.....	.....	.....	Nov. 20	Allianca	Panama Railroad Steamship Line	New York.

*Other than ships passing through the Canal.

View of the Repair Wharf and Shops at Balboa.

In connection with the reports of ship repairs at the Canal shops, which are published each week, there is presented, on page 201, opposite, a view of the repair wharf and shops at Balboa, the principal manufacturing and repair plant at the Canal. The 1,000-foot dry dock, adjoining the shops, on the opposite side from the repair wharf, is partly visible on the extreme right of the view. The 50-ton steam crane which is mounted on a track extending around both sides and the inner end of the dry dock, and out to the near end of the repair wharf, may be seen projecting above the roofs of the shop buildings. The principal repair wharf has a length of 2,663 feet, extending from a point opposite the land end of the pier shown on the left of the picture to the corner at which the nearest steamship is moored; and the length of the section alongside which the barges are tied up is 290 feet. The average width of the wharf is 60 feet. Additional mooring space for repairs is available alongside the wharves forming the approach to the dry dock.

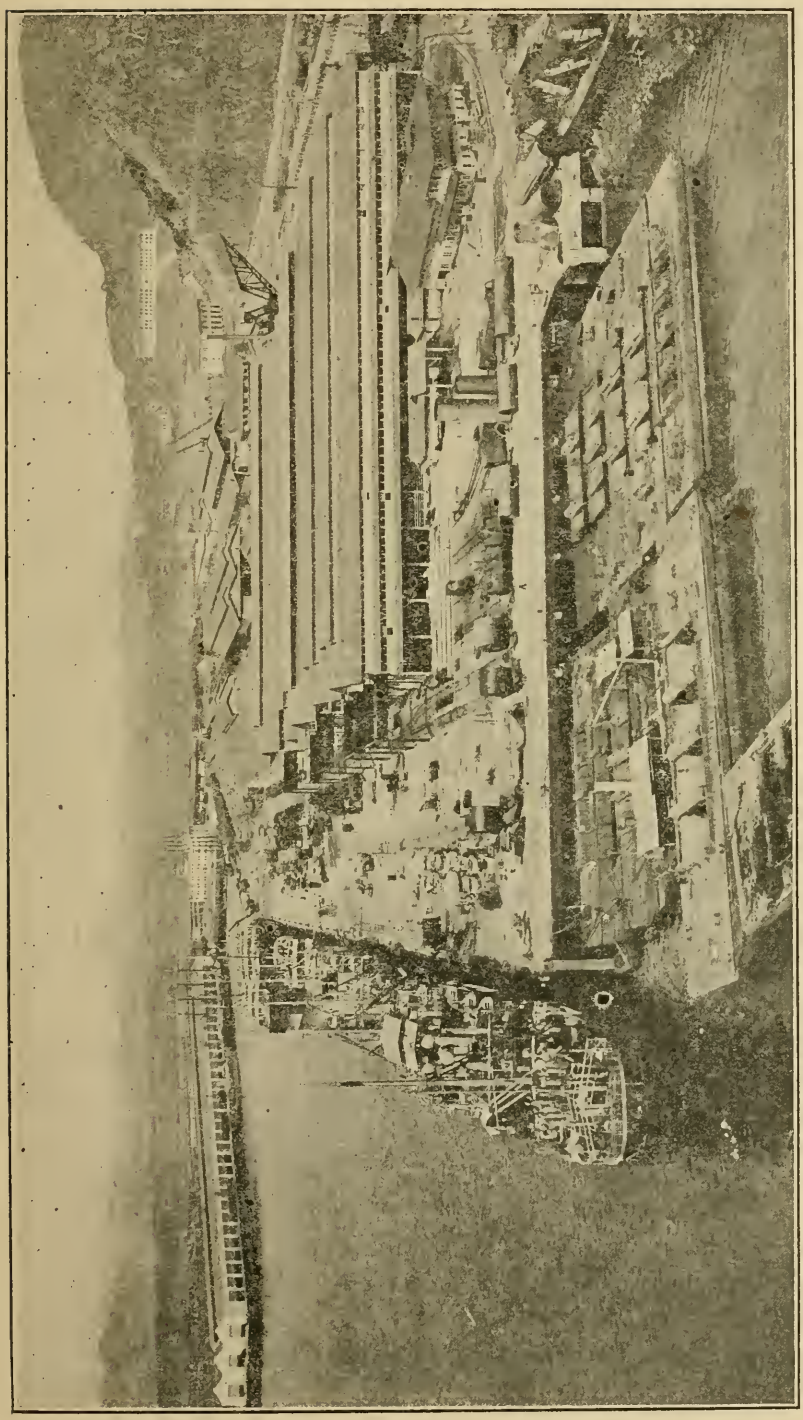
The shops at Balboa cover an area of approximately 60 acres, and employ about 2,300 men, of whom about 800 are American "gold" employees and about 1,500 are alien or "silver" men.

The 3-story building seen beyond the far end of the repair wharf, in rear of the dock between the repair wharf and the pier, is the Pacific Terminal Building, containing the offices of the Captain of the Port, the Deputy Shipping Commissioner, steamship lines, and other marine interests at the Pacific terminal. The 3-story building on a hill, in the upper right corner of the view, is the Administration Building of the Canal, housing the central administrative offices of The Panama Canal and the Panama Railroad.

Buildings of Shipping and Allied Interests in Cristobal.

With the beginning of work on the office building for the All-America Cables, Inc., 3 buildings for shipping and allied interests are now under construction on lots reserved for this purpose at Cristobal, close to the terminal. A 3-story concrete building is being erected for the Royal Mail Steam Packet Company and its affiliate, the Pacific Steam Navigation Company; and a 2-story concrete building for the Royal Netherlands West India Mail is nearing completion.

Buildings of this class at Cristobal previously completed and in use are those of the United Fruit Company and the Hamburg-American Line, built before the United States entered the World War, the Hamburg-American Building being afterwards seized by the Government; the Compagnie Generale Transatlantique (French Line) and La Veloce Navigazione Italiana a Vapor ("La Veloce" Line). The American Bible Society has a building a block in rear of the area devoted to steamship office buildings. The Salvation Army and the Army and Navy Y. M. C. A. are using frame buildings which belong to The Panama Canal. The Y. M. C. A. is in a building which was originally built on Cristobal Point by the French and used by them during the French construction period; during the American construction period it was the headquarters of the Subsistence Department. This organization has recently been assigned a lot on the northwest corner of Bolivar and Twelfth streets, just south of the Masonic Temple Building upon which to erect a permanent structure. The offices in the Masonic Temple at Cristobal, which is owned by



VIEW OF THE REPAIR WHARF AND SHOPS AT BALBOA (*see* page 200).

the Panama Railroad Company, are occupied almost entirely by shipping and commercial interests.

The Pacific Mail Steamship Company has applied for a lot in Cristobal for an office building, and the building sites committee will assign it Lot 2 in Block 3, which is adjacent to the lot on which the All-America Cables building is being erected. Some 5 years ago the American Seamen's Friend Society was assigned a lot located between Third and Fourth avenues, south of the old restaurant, the lot adjoining the American Bible Society's lot on the south. Up to the present time, however, no building has been erected thereon by the American Seamen's Friend Society. Cristobal Council of the Knights of Columbus, in 1917, was assigned a site situate on the southwest corner of Bolivar and Twelfth streets; up to the present time, however, no structure has been erected by them upon the site. And at the last meeting of the building sites committee it was recommended to the Governor that a site immediately south of the ground held under license by the Knights of Columbus be assigned to the Oddfellows.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending November 20, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	*Tons.*
Toloa	United Fruit Co.	November 14.	November 14.	98	14
Caribbean	Panama Railroad Cattle Industry.		November 14.		(2)
Colon	Panama Railroad Steamship Line.		November 14.		3,132
Puerto Rico	French Line		November 14.		121
San Blas	United Fruit Co.	November 15.	November 15.	45	(3)
Cauca	Pacific Steam Navigation Co.		November 16.		278
Huasco	Chilean Steamship Co.		November 16.		429
Nevisian	Leyland Line	November 15.	November 17.	826	222
Ucayali	Peruvian Line		November 17.		939
Heredia	United Fruit Co.	November 15.	November 18.	956	119
Allianca	Panama Railroad Steamship Line.	November 15.	November 20.	494	2,073
Quillota	Pacific Steam Navigation Co.	November 16.	November 17.	177	196
Calamares	United Fruit Co.	November 16.	November 17.	576	63
Metapan	United Fruit Co.	November 17.	November 17.	3	2
Advance	Panama Railroad Steamship Line.	November 17.		1,838	
Acajutla	Pacific Steam Navigation Co.	November 18.		193	
La Navarre	French Line	November 18.		125	
Caribbean	Panama Railroad Cattle Industry.	November 18.		350	
City of Para	Pacific Mail Steamship Co.	November 19.		356	
[1]Madawaska	United States Government	November 19.		766	
La Paz	Pacific Steam Navigation Co.	November 20.		137	
Balboa	Colombian Maritime Co.	November 20.		602	
Bologna	Italian Steamship Co.	November 20.		281	
Laura C. Hall	Pacific Metals Corporation		November 20.		15
Arzila	Pacific Steam Navigation Co.		November 20.		1,534

[1] United States Army transport. [2] 418 pounds. [3] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending November 20, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	*Tons.*
Ucayali	Peruvian Line	November 17.	November 17.		70
City of Para	Pacific Mail Steamship Co.	November 18.	November 19.	321	67
Balboa	Colombian Maritime Co.	November 20.	November 20.	1	
Laura C. Hall	Pacific Metals Corporation, Ltd.	November 20.			62
Vinton County	United States Shipping Board	November 20.			62

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

EXECUTIVE ORDER.

Licensing of Chauffeurs.[1]

By virtue of the Act of Congress entitled "An Act extending certain privileges of canal employees to other officials on the Canal Zone and authorizing the President to make rules and regulations affecting health, sanitation, quarantine, taxation, public roads, self-propelled vehicles, and police powers on the Canal Zone, and for other purposes, including provisions as to certain fees, money orders and interest deposits," approved August 21, 1916, I hereby establish the following Executive Order for the Canal Zone:

Section 1. That hereafter the word "automobile" wherever the same is used in the Executive Order dated October 9, 1918, which Executive Order was published in THE PANAMA CANAL RECORD of November 13, 1918, and became effective thirty days thereafter and is still in force, shall be construed to include any and all motor-propelled vehicles, and shall specifically include motorcycles.

Section 2. This order shall take effect thirty days from and after its publication in THE PANAMA CANAL RECORD.

WOODROW WILSON

THE WHITE HOUSE,
30 Oct., 1920.

[No. 3347.]

[1] Will be published as Canal circular No. 604-114.

Cable Office Building at Cristobal.

Work has been begun on the erection of a building at Cristobal for the offices at the Atlantic terminus of the All-America Cables, Inc. The site is on Roosevelt Avenue, opposite the west end of the Terminal Building.

The building is to be 2 stories in height, 48 by 94 feet in plan, over all, and will be built of concrete. The design is tropical architecture, with porches or arcades on 3 sides, and a red tile roof. The general arrangement is to be similar to that of the cable building at Balboa, though the latter is 60 by 70 feet in plan, and the first floor will be similarly divided into instrument room, offices, foyer, storage spaces, electricians' rooms, etc. On the second floor will be family and bachelor quarters for employees of the company; at Balboa the second floor is used as bachelor quarters, the family quarters for the company's employees being at Cable Heights, Ancon.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended November 20:

Barge *No. 131*, general repairs; steamship *Marne*, general repairs and rebuilding; dredge *No. 83*, general repairs; launch *Captain Wilhelm*, hull repairs and installation of new engine; steamship *General Hodges*, general repairs; tug *Bohio*, general repairs and rebuilding; steamship *Ansaldo San Giorgio IV*, installation of 2 new feed pumps, repairs to steering rod and calking bridge; launches *Limon*, general overhauling; *Captain C. D. Harris*, repairs to engine; steamships *Wawalona*, clean and overhaul fresh water tank; *Lake Ellicott*, repairs to H. P. and I. P. cylinders and eccentric shaft; mine yawl *No. 253*, general repairs; steamships *Nishmaha*, renew H. P. piston rings; *Olockson*, pumping out and trimming ship.

The following vessels were at the Cristobal shops for repairs during the week ended November 22:

Steamships *Allianca* and *Advance*, miscellaneous repairs and painting to engine, deck, and steward departments; *Wawalona*, repair L. P. piston and pipe up L. P. drains; *Navarre*, repair ice machine; *Aviles*, repair beam pump; tug *Relief*, repair boiler, tanks, beam pump, etc.; steamship *Victoria*, repair bow and patch hole in hull; U. S. A. T. *Santa Leonora*, test out and put ice machine in running order; steamship *Bologna*, repairs to boilers and plumbing; launch *Pequeni*, overhaul both engines; U. S. S. C. *No. 285*, overhaul main and auxiliary engines; steamship *Lake*

Flynus, remove dents in hull, renew loose rivets, miscellaneous repairs; tug *Tavernilla*, install new uptakes, butts, L. P. rings, repair pumps, towing machine, circulating engine, etc.; S. P. *No. 2232*, general overhaul and alterations; steamship *Heredia*, tug *St. Giles*, steamship *Caribbean*, schooner *Arabia*, steamships *La Paz*, *City of Para*, U. S. A. T. *Madawaska*, steamship *Balboa*, U. S. S. *Owl*, U. S. S. Eagle *No. 31*, tug *St. Aristell*, steamships *Frederick Luckenbach* and *Quilpue*, minor repairs.

Full Tariff Passenger Rates on Panama Railroad Steamship Line.

In view of the discontinuance, under circular No. 610-3, dated October 22, 1920, of the $45 rate for transportation of relatives of Government employees between Cristobal and New York, the following is published for the information and guidance of all concerned:

New York to Cristobal.—The steamship ticket agent at Cristobal and the station agent at the passenger station in Panama will accept deposits for the prepayment of full fare steamship tickets from New York to Cristobal for visiting relatives and others not entitled to the employees' rate.

The first cabin rate for adult passengers from New York to Cristobal is $100, plus $5 for war revenue stamp.

For children under 12 years, $50, plus $3 for revenue stamp.

One child under 3 years will be carried free.

Additional deposit of $5 is required on all reservations requested or handled by cable communication.

Cristobal to New York.—Requests for reservations at the full tariff rate from Cristobal to New York should be made direct on the steamship ticket agent, Cristobal, telephone, Cristobal 25.

The above-named rates apply from Cristobal to New York with the exception that no war revenue charge is made.

Weather Conditions in October, 1920.

The rainfall for the month was generally below normal over the Pacific section and at Brazos Brook, and above normal throughout the remainder of the Canal Zone and vicinity. The maximum excess of rainfall occurred over the Chagres and Trinidad valleys, the October rainfall at stations located in these watersheds being the highest on record for the month. Totals ranged from 6.48 inches at Balboa Heights to 29.61 inches at the Chilibrillo station (Cape Mala not included). The greatest amount of rainfall recorded in 24 hours was 5 inches, at Gamboa on October 21 and 22.

The estimated October rainfall over the Gatun Lake watershed was 22.86 inches, compared with a 10-year mean of 16.17 inches. Over the Chagres River watershed above Alhajuela it was 26.07 inches, compared with a 19-year mean of 15.18 inches.

The air temperature, daytime cloudiness, and surface temperature of the sea were slightly above the normal; the atmospheric pressure was approximately normal; and the relative humidity and wind movement were slightly below the normal. The evaporation was above normal over the Pacific section, and below over Gatun Lake surface.

A number of light and dense fogs were observed at interior stations all of which lifted or were dissipated by 8.30 a. m.

Seismic tremors were recorded on the 7th, 22d, and 28th of the month.

Gatun Lake hydrology—Mean elevation of Gatun Lake was 86.30 feet; maximum, 86.89 feet, on the 20th; minimum, 86 feet, on the 1st; evaporation from Gatun Lake surface was 3.8 inches; rainfall on Gatun Lake drainage basin, 22.86 inches; total yield of Gatun Lake watershed, 14.06 inches on the watershed; the total yield amounted to 62 per cent of the rainfall.

Climatological conditions at the representative stations are summarized in the following table:

Stations.	Pressure (reduced to mean of 24 hours).	Temperature.					Mean relative humidity.	Precipitation.			Wind.				
		Mean.	Maximum.	Date.	Minimum.	Date.		Total inches.	Station average.	Days with .01 inch or more.	Total movement (miles.)	Prevailing direction.	Maximum velocity in miles.	Direction.	Date.
Balboa Heights	29.842	79.7	89	Oct. 15	71	Oct. 29	86	6.48	10 17	22	4,452	N.W.	30	S.	Oct. 24
Colon	29.840	80.9	90	Oct. 7	73	Oct. 13	85	17.16	15.07	26	4,745	W.	33	N.	Oct. 1
Gatun	.....	80 2	91	Oct. 17	72	Oct. 29	....	17.57	16.62	28	3,725	N.W.	23	S.W.	Oct. 24
Gamboa	.....	79 0	90	Oct. 1	70	[1] Oct. 2	...	24.93	13.08	28	3.213	N.E.	26	N.E.	Oct. 20

[1] And other dates.

Launch "Pequeni" in Taboga Service.

The 30-ton gasoline launch *Pequeni* will shortly be substituted for the gasoline tug *Coco Solo* in the Taboga service, after being overhauled at Cristobal Shops. The *Pequeni* is 68 feet long, 3 feet longer than the *Coco Solo*, and is propelled by twin screws, run by 2 engines of 60 horsepower. Its use is expected to reduce the time between Balboa and Taboga by 10 to 15 minutes. The *Pequeni* was built in 1915, and named for a river which is tributary to Gatun Lake.

December Weather Probabilities.

The following weather conditions may be expected at the Canal entrances during the month of December, 1920. Predictions are based on Colon and Ancon-Balboa Heights records for the past 13 and 14 years, respectively:

Winds—With the approach of the dry season, there will be an acceleration of the wind movement at both Canal entrances. North and northeast winds will prevail over the Atlantic Coast, with an average hourly velocity of from 9 to 14 miles an hour, the higher velocity occurring from noon to 5 p. m. The maximum velocity for a 5-minute period is not likely to exceed 35 miles an hour.

Northwest winds will continue over the interior and at the Pacific entrance, the average hourly velocity being from 6 to 9 miles an hour. Here, too, a maximum velocity of 35 miles an hour may occur during occasional wind squalls.

Rain—The month of December usually marks the transition from rainy season to dry season conditions. Occasionally the dry season begins as early as the 1st of the month, while in other years rainy season weather has continued until the end of the month. The tendency is for the rains to linger later in the season along the Atlantic Coast than on the Pacific, and for the percentage of daytime rainfall to be greater on the Pacific side. The average rainfall for the month is 11.61 inches at the Atlantic entrance, and 4.17 inches at the Pacific entrance, these averages are for periods of 49 and 23 years, respectively. About 21 days with rain may be expected on the Atlantic Coast and about 15 on the Pacific side, while the average number of days with heavy rain (1 inch or more), is 3 and 2, respectively.

Fogs—No fogs are likely to occur at either Canal entrance, but night and early morning fogs may be expected over the interior. The average number of fogs during the month over the Gaillard Cut section of the Canal is 15. All of the fogs that occur may be expected to lift or become dissipated before 8.30 p. m.

Temperature—The average shade air temperature will be close to 80° Fahrenheit over both coasts. On the Atlantic Coast the temperature is not likely to rise above 90° F., or fall lower than 66° F., while on the Pacific side a maximum temperature as high as 94° F. may occur. The minimum record on both coasts is 66° F. The mean daily range in temperature should be about 8° F. on the Atlantic Coast, and 16° on the Pacific.

Barometric pressure—Atmospheric pressure over the Isthmus is remarkably constant and uniform, and except for the well-marked diurnal changes, local fluctuations in pressure are so slight that they have little value as indicators of future weather conditions. The average sea-level pressure will continue close to 29.85 inches. The maximum reading for the month is not likely to exceed 30 inches, nor the minimum to fall lower than 29.65 inches.

Relative humidity—With the approach of the dry season there will be a decrease in the percentage of moisture in the air. The humidity should average about 85 per cent over both coasts. The daily range, however, is greater on the Pacific Coast.

Storms—The so-called "northers" occasionally reach as far south as the Atlantic entrance to the Canal during the period from October or November to April inclusive. These storms are characterized by brisk, northerly winds, ranging in velocity up to 30 or more miles an hour. The winds alone are of insufficient force to affect navigation seriously, but they are usually accompanied by a heavy sea or swell that may at times prove very troublesome. Local thunderstorms will not be so frequent during the month of December. The average number of thunderstorms during the month is 4 on the Atlantic Coast, and 5 on the Pacific.

Generally smooth seas may be expected throughout the month at the Pacific entrance to the Canal.

Tides—Tidal fluctuations at Colon are so slight that they need not be considered in navigating the Atlantic entrance to the Canal.

Panama tide predictions for the month are given below:

Day of- W.	Day of- Mo.	Time and Height of High and Low Water.			
W	1	1:27	7:37	1:50	8:10
		0.8	16.1	0.4	16.2
Th	2	2:26	8:31	2:48	9:04
		1.5	15.3	1.4	15.5
F	3	3:28	9:30	3:47	10:04
		2.1	14.4	2.2	14.8
S	4	4:28	10:36	4:48	11:10
		2.6	13.7	2.9	14.3
S	5	5:31	11:47	5:50	.....
		2.8	13.4	3.3	.....
M	6	0:16	6:33	12:52	6:50
		14.2	2.9	13.4	3.5
Tu	7	1:12	7:32	1:47	7:49
		14.3	2.5	13.7	3.4
W	8	2:03	8:25	2:35	8:41
		14.5	2.1	13.9	3.1
Th	9	2:47	9:11	3:20	9:27
		14.6	1.7	14.2	2.7
F	10	3:29	9:53	4:03	10:08
		14.8	1.3	14.4	2.4
S	11	4:11	10:31	4:45	10:47
		14.8	1.1	14.6	2.2
S	12	4:51	11:08	5:25	11:25
		14.7	1.0	14.7	2.2
M	13	5:31	11:44	6:03	.....
		14.6	1.2	14.7	.....
Tu	14	0:02	6:10	12:20	6:39
		2.4	14.4	1.5	14.6
W	15	0:40	6:46	12:57	7:15
		2.6	14.0	2.0	14.4
Th	16	1:21	7:22	1:38	7:50
		3.0	13.6	2.5	14.2
F	17	2:05	7:59	2:21	8:28
		3.3	13.2	3.0	13.9
S	18	2:52	8:39	3:09	9:11
		3.6	12.8	3.4	13.6
S	19	3:43	9:31	3:59	10:06
		3.7	12.4	3.7	13.4
M	20	4:38	10:35	4:56	11:07
		3.6	12.2	3.9	13.5
Tu	21	5:35	11:43	5:57	.....
		3.3	12.5	3.7	.....
W	22	0:11	6:36	12:47	7:01
		13.9	2.8	13.1	3.3
Th	23	1:08	7:38	1:46	8:04
		14.5	1.9	14.0	2.4
F	24	2:04	8:36	2:42	9:01
		15.3	0.8	14.9	1.4
S	25	2:58	9:29	3:35	9:54
		16.0	-0.3	15.8	0.4
S	26	3:52	10:19	4:29	10:43
		16.6	-1.1	16.5	-0.3
M	27	4:45	11:07	5:23	11:32
		16.9	-1.5	17.0	-0.8
Tu	28	5:41	11:54	6:16	.....
		17.0	-1.6	17.2	.....
W	29	0:21	6:33	12:41	7:04
		-0.6	16.8	-1.2	17.1
Th	30	1:11	7:24	1:31	7:54
		-0.1	16.3	-0.4	16.8
F	31	2:05	8:14	2:24	8:42
		0.5	15.5	0.6	15.7

The tides are placed in the order of their occurrence: the *times* of high and low tides are shown on the upper lines. The figures in boldfaced type are hours and elevations between noon and midnight; *ante meridian* figures are given in the ordinary lightfaced type. The time is Cosmopolitan Standard for the meridian 75° W.

The *elevations* of the water are shown on the second line for each day; a comparison of consecutive heights will indicate whether it is high or low water. Heights are reckoned from mean low water springs, which is 8.3 below mean sea level and is the datum of soundings on the Coast and Geodetic Survey charts for this region. The depth of water may accordingly be estimated by adding the tabular height of the tide to the soundings, unless a minus (—) sign is before the height, in which case it is to be subtracted. The annual inequality or variation in the mean sea level is included in the predictions.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights (telephone 286):

Aid (male and female); $1,500 a year; form 1312; No. 661; age, 21 but not 30 years; vacancies exist in the field service of the Lighthouse Service; December 21, 1920.[1]

Assistant observer, Weather Bureau (male and female); $1,080 a year; form 304; No. 655; age, 18 but not 35 years; vacancies exist in the offices of the Weather Bureau; December 15, 1920, January 19, and February 23, 1921.

Automotive machinist; automotive mechanic (male and female); Grade 1, $1,200 to $1,800 a year; age, 18 but not 65 years; Grade 2, $1,800 to $2,400 a year; age, 21 but not 65 years; vacancies exist in the Bureau of Public Roads, Department of Agriculture; December 14, 1920.[1]

Foundry helper (male and female); $720 to $1,080 a year; form 304; No. 666; age, 18 but not 65 years; vacancies exist in the Bureau of Standards, Department of Commerce, Washington, D. C.; December 15, 1920.

Laboratory aid, motion-picture laboratory (male and female); form 304; No. 657; $900 to $1,200 a year; age, 17 but not 45 years; vacancies exist in the Division of Publications, Department of Agriculture and Reclamation Service, Washington, D. C.; December 15, 1920.

Radio inspector (male and female); $1,620 to $1,980 a year; form 1312; No. 665; age, 21 but not 70 years; vacancies exist in the Bureau of Navigation, Department of Commerce; December 15, 1920.

Shop apprentice (male and female); $720 a year; form 1312; No. 645; age, 16 but not 18 years; vacancies exist in the Bureau of Standards, Department of Commerce, Washington, D. C.; March 1, 1921.[1]

Stacker and conveyor operator (male and female); 64 cents per hour; form 1800; No. 660; age, 20 but not 65 years; vacancies exist at the Government fuel yards, Bureau of Mines, Washington, D. C.; December 21, 1920.[1]

Subclerical (male and female); $600 to $720 a year; form 304; No. 668; age, 18 but not 70 years; vacancies exist in the Departmental Service, Washington, D. C.; December 15, 1920.

Superintendent of construction (male and female); $2,500 to $3,000 a year; form 1312; No. 651; age, 25 but not 55 years; vacancies in the Public Health Service; Washington, D. C.; December 7, 1920.[1]

Copyist topographic draftsman; No. 2268-amended-supplemental; amended to show salary as $900 to $2,000.

[1]Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings, or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Archie L. Reeve.....	633	United States...	Gatun.....	Police and Fire Div....	March 30, 1920.
James Benjamin.....	28564	Antigua.....	Red Tank.....	Mun. Eng. Div.....	November 7, 1920

Official Circulars.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 15, 1920.

CIRCULAR No. 269:

Effective November 5, 1920, Mr. J. H. K. Humphrey is designated an accountable official of The Panama Canal, *vice* Mr. W. B. Brown, deceased, and as such will account for all nonexpendable property in use by the Cattle Industry Division.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
CHESTER HARDING,
Governor.

Superintendent, Cattle Industry Division.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 16, 1920.

To all concerned—Effective November 15, Mr. J. H. K. Humphrey is appointed Superintendent, Cattle Industry Division.

R. K. MORRIS,
Chief Quartermaster.

Approved:
CHESTER HARDING,
Governor.

Shipments of Surveyed Property.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 17, 1920.

CIRCULAR No. 270:

To all concerned—It has been called to my attention that shipments of surveyed property turned into stores are often received short. When storekeepers or others receive short shipments of surveyed nonexpendable property they must forward a list of the missing articles to the responsible official with the advice that if they are not received within 30 days the survey will be accomplished for only the number of articles actually received. If the articles have not been received within 30 days all copies of the survey will be accomplished, the shortage being shown on the face of each copy in red ink.

Responsible officials must dispose of surveyed property promptly in accordance with the instructions of the Surveying Officer. Shipments of small articles that may be easily removed must not be made in open cars. Losses from shipments covered by survey requests must be traced and, when they can not be located, relief requested in the same manner as losses from shipments covered by vouchers or transfer receipts.

All are advised that the same care must be exercised in accounting for surveyed nonexpendable property as in shipping and storing it as is required in the handling of serviceable property and that the above instructions and those contained in Circulars 239 and 263 must be complied with.

Accountable officials will please see that copies of this circular reach all concerned.

H. A. A. SUITH,
Auditor, The Panama Canal.

Approved:
CHESTER HARDING,
Governor.

Reducing Waste of Water.

THE PANAMA CANAL,
DEPT. OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., November 13, 1920.

To all concerned—Starting November 15, Mr. William Fullman, plumbing inspector, will make a careful inspection of all water installations in the Canal Zone with a view of eliminating the large waste of water which now occurs.

The amount of water now consumed is rapidly reaching the capacity of the filtration plants and drastic action will have to be taken to curtail consumption.

Your cooperation is requested.

G. W. GREEN,
Acting Municipal Engineer.

Approved:
J. J. MORROW,
Engineer of Maintenance.

General Agent for Panama Railroad Steamship Line at Port-au-Prince.

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
BALBOA HEIGHTS, C. Z., November 18, 1920.

To heads of all Panama Canal and Panama Railroad departments—I wish to advise for your information that, effective November 1, 1920, Capt. O. B. Thompson has been appointed General Agent of the Panama Railroad Steamship Line at Port-au-Prince, Haiti.

S. W. HEALD,
Superintendent.

Rainfall from October 1 to October 31, 1920, Inclusive.

STATIONS.	Maximum in 1 day.	Date.	Total.
Pacific section—	*Ins.*		*Ins.*
Balboa	1.28	22	6.64
Balboa Heights	1.40	22	6.48
Miraflores	1.68	16	11.54
Pedro Miguel	1.17	31	10.25
Rio Grande	1.98	4	14.94
Central section—			
[1] Culebra	2.42	1	16.02
[1] Camacho	2 20	10	14.49
Empire	2.24	1	15.64
Gamboa	3.09	21	24.93
[1] Juan Mina	2.81	22	27.45
Alhajuela	2.44	3	25 20
Vigia	3.44	24	26.54
[1] Darien	2.02	29	15.85
[1] Trinidad	4.58	26	24.06
[1] Monte Lirio	2.74	20	18.30
Atlantic section—			
Gatun	2.02	22	17.57
[1] Brazos Brook	2.42	29	14.33
Colon	2 15	31	17.16
[2] Bocas del Toro	1.82	4	8.58
[1] Porto Bello	4.00	19	27.42

[1] Standard rain gauge—readings at 5 p. m. daily.
Automatic rain gauge at unstarred stations—values, midnight to midnight.
[2] Standard rain gauge—readings at 8 a. m. daily.

October Rainfall for Three Years.

Stations.	INCHES. 1918	1919	1920	Station average.	Years of record.	Rainy days, 1920.
Pacific section—						
Balboa	8.52	11.82	6.64	9.32	22	22
Balboa Heights	19.16	12.11	6.48	10.17	24	22
Miraflores	10.01	11.54	11.54	11.97	13	26
Pedro Miguel	10.57	11.25	10.25	11.67	13	26
Rio Grande	16.02	16.37	14.94	12.88	16	29
Central section—						
Culebra	16.81	15.62	16.02	11.70	32	27
Camacho	16.66	13.66	14.49	13.31	15	24
Empire	20.15	12.41	15.64	13.37	16	30
Gamboa	17.25	11.72	24.93	13.08	38	28
Juan Mina	16.77	14.57	27.45	15.96	11	27
Alhajuela	12.03	15.46	25.20	14.59	22	31
Vigia	13.81	12.01	26.54	16.69	13	30
Frijoles	19.36	18.92	21.00	16.81	9	....
Trinidad	15.71	15.85	24.06	15.33	13	27
Monte Lirio	23.57	15.84	18.30	16.84	13	29
Atlantic section—						
Gatun	22.73	17.46	17.57	16.62	16	28
Brazos Brook	27.30	20.65	14.33	17.05	15	27
Colon	27.07	21.94	17.16	15.07	51	26
Porto Bello	.....	15.71	27.42	14 79	8	29
Bocas del Toro	4.32	7.52	8.58	6.18	12	24

Panama Railroad Steamship Line Sailings from Cristobal.

The following are the probable dates of sailings of steamers of the Panama Railroad Steamship Line from Cristobal to New York in the period to January 1, 1921:

Gen. Geo. W. Goethals, via Port-au-Prince, November, 29; *Panama*, via Port-au-Prince, December 7; *Colon*, via Haitian ports, December 14; *Gen. W. C. Gorgas*, via Haitian ports, December 20; *Allianca*, December 24.

Rates at Hotel Aspinwall, Taboga.

Rates at the Hotel Aspinwall, Taboga, are quoted below. A reduction of 10 per cent is made for families of 4 or more paying members:

Nonemployees, per week	$17.50
Employees, per week	14.00
Employees, per month	50.00

COMMUTATION RATE.

Lodging, breakfast, dinner, transportation:

Nonemployees, per week	$17.50
Employees, per week	12.50
Employees, per month	50.00

Reservations may be made through the manager of the Canal restaurant at Balboa (telephone Balboa 397).

Additions to Commissary Stock.

Boots and Shoes Section.

Slippers, women's, knitted, assorted colors, sizes 3 to 7, pr.	$1.10
Slippers, misses', knitted, assorted colors, sizes 11 to 2, pr.	1.00
Slippers, children's, knitted, assorted colors, sizes 6 to 10, pr.	.89
Slippers, infants', knitted, sizes 1 to 5, pr.	.79

Dry Goods Section.

Suiting, English:	
Drill, cotton crash, 27/8″, yd.	.44
Suiting, serge, blue and white striped, 56″, yd.	5.60
Tropical, 60 per cent wool, 40 per cent cotton, 54/5″, yd.	1.80
Brassieres, 18116 (Cluny lace trimmed), ea	1.70
Dress goods:	
Gingham, dress, 26″, yd.	.43
Skirting, fancy, white, D. & R., 36″, yd.	1.70
Skirting, fancy, white, D. & R., 36″, yd.	1.75
Skirting, fancy, white, D. & R., 36″, yd.	1.65
Suiting, English: Duck, white, linen, 27″, yd.	3.25
Overalls, with bib, brown, pr.	2.05
(Formerly under S. N. 16404, white.)	

Grocery Section.

Cherries, white, ⅓s tin	.31
Huckleberries, 2s tin	.40
Molasses, P. C., 1/5s bot.	.30
(Five cents allowed for return of empty bottle.)	
Petit Pois, Belgian, ½-kl. tin	.29
Richmond Straight Cuts, 20s box	.19
Spinach, 10s tin	.63
(For wholesale trade only.)	

Books.

The juvenile books ordered by the Commissary Division for the Christmas trade are superior to those previously sold here. Many of these already have been received and will be on sale this week in the line stores.

Among them are, of course, books by Eugene Field and Robert Louis Stevenson. Kipling is represented by his "Just So Stories," and other well-known authors are in the list. There are Mother Goose tales, fairy tales, "bedtime" stories, and tales of adventure, both for girls and boys. There is a wide range of titles, so that everyone may be able to find an appropriate gift book.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Volume XIV. Balboa Heights, C. Z., December 1, 1920. No. 16.

Departure of Senator Harding and Party.

Senator Warren G. Harding, President-elect of the United States, and party, who arrived on the Isthmus from New Orleans on November 23, sailed for Norfolk on the steamship *Pastores* in the afternoon of November 27.

Senator Harding expressed himself as greatly impressed by the work which had been done on the Isthmus and by the effectiveness of the Canal organization in handling traffic and meeting the needs of shipping at the terminal ports.

Visit of Portions of Atlantic and Pacific Fleets in January and February.

The major parts of the Atlantic and Pacific Fleets of the United States Navy are expected to be in Canal waters together in January and again in February, 1921. A copy of the schedule of employment of the Atlantic Fleet has been received. The forces which will come to the Canal are due to leave Guantanamo Bay on January 17 and arrive at Cristobal on January 19, passing through the Canal on the 20th, and clearing on January 24 for Callao. They are due to reach Callao on February 2 and remain a week, clearing on February 9 and arriving at Balboa on February 18. They are then to remain a week at the Canal, leaving on February 26 for Guantanamo.

The schedule of the Pacific Fleet has not been received, but it is understood that a considerable portion of it will arrive at Balboa at the same time as the Atlantic Fleet, and will proceed south with it, continuing beyond Callao to Valparaiso. On the return cruise to Balboa the forces are to have strategic, tactical, and gunnery exercises; and the schedule of the Atlantic Fleet itemizes, for the week from February 18 to 25 at Balboa, "recreation; interfleet athletics."

Preparations are being made to handle liberty parties on the Panama Railroad, and to supplement the reserve food supplies of the Canal as may be necessary to meet the requirements of the fleets, while protecting the usual 30 days' reserve for the steamship trade and local consumption.

A view of 10 destroyers being handled through the locks simultaneously, during the passage of the Pacific Fleet through the Canal in July, 1919, is presented on page 212. Six were placed in one chamber in 2 ranks of 3 each, and 4 in the parallel chamber. Each of the destroyers is 310 feet long by 30 feet 11¾ inches in breadth on the load water line. The locks have a usable length of 1,000 feet and width of 110 feet.

Cook's and American Express Company Tours.

Messrs. Thos. Cook & Son have advised that parties of tourists under their guidance will arrive at Cristobal on the steamship *Calamares* on February 11 and on the *Ulua* on March 12.

American Express Company tours are scheduled to arrive at Cristobal on the steamship *Ulua* on January 28, on February 6 on a ship not named, and on the *Toloa* on March 4.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight November 27, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Brush	20	14.50	21	6.14	21	12.52	21	14.00	American	North Atl. & Western S. S. Co.	390.0	54.2	20.6	Boston	San Francisco	General mdse.	4,500	6,161	4,433
Lake Fanbush	20	16.30	21	6.22	21	13.33	21	14.30	American	N. O. & S. A. S. S. Co. (S. B.)	251.0	43.6	24.1	New Orleans	Talcahuano	General	2,812	2,861	1,816
Dorset	20	18.03	21	6.27	21	14.54	21	16.30	British	New Zealand Shipping Co	460.0	58.2	26.6	Newport News	Auckland	General	8,083	9,223	6,585
La Paz	20	5.51	21	6.55	21	15.47	22	0.45	British	Pacific Steam Navigation Co	406.1	54.0	26.2	Glasgow	Valparaiso	General	9,678	7,216	4,912
Theodore Roosevelt[1]	21	4.06	21	8.54	21	16.22	21	22.25	Norwegian	Fred Olsen & Co	425.0	55.0	29.0	Norfolk	Iquique	Coal	9,900	7,593	5,637
Aviles	18	20.34	21	12.16	21	18.50	24	13.48	Spanish	Alejandor Navajas	370.0	41.2	15.0	Valencia	Arica	Ballast		3,731	2,581
Southampton[2]	20	23.42	21	12.17	21	18.35	25	12.36	British	British Government	430.0	49.0	18.6	Trinidad	Valparaiso				
Schodack	21	17.20	22	6.10	22	15.21	22	16.28	American	United States Shipping Board	390.0	54.0	25.1	New York	Yokohama	General	6,496	6,106	4,401
Havo	21	14.16	22	6.24	22	14.19	29	14.30	Norwegian	Henrik Ostervold	385.0	51.0	25.0	Sabine	Melbourne	Sulphur	6,150	5,210	3,756
Effingham	21	21.00	22	6.30	22	14.05	22	15.00	American	Williams Dimond & Co. (S. B.)	402.6	54.8	16.0	New York	San Francisco	General	2,662	6,932	5,181
Henrik Lund	22	7.25	22	7.40	22	15.39	22	17.25	Norwegian	Willy Gilbert	340.2	47.2	25.0	Galveston	Sydney	Sulphur	5,250	4,380	3,242
Raithwaite	22	8.20	22	8.40	22	16.39	22	17.55	British	Leslie Shipping Co	324.0	47.0	20.5	Baltimore	San Antonio	Coke and oil	3,435	3,358	2,400
Rotarian	22	10.52	22	11.20	22	18.20	22	19.20	American	Swayne & Hoyt (S. B.)	380.5	53.0	18.3	Buenos Aires	San Francisco	General	1,435	5,660	4,174
Cape Natal	22	11.29	23	6.13	23	12.48	23	13.48	British	British Africa Coaling Co	330.0	46.0	16.0	New York	San Francisco	Ballast		3,481	2,169
Chatham[2]	21	17.05	23	6.40	23	14.39	23	16.25	British	British Government	456.9	49.6	28.0	Port-of-Spain	Salina Cruz				
Peter H. Crowell	22	20.00	23	10.10	23	17.33	23	18.30	American	Crowell & Thurlow	313.0	46.0	14.0	Barbados	Callao	Ballast		3,351	2,318
Relief[3]	18	14.20	23	10.40	23	16.38	27	9.07	American	Rolph Navigation Co.	112.0	22.5	12.5	Brunswick, Ga	San Francisco	Ballast		219	51
Bologna	20	9.30	23	10.40	23	16.38	23	18.35	Italian	La Veloce Steamship Line	385.0	47.0	19.6	Genoa	Valparaiso	General	549	5,192	3,593
Madawaska[4]	19	20.50	23	11.55	23	19.00	23	20.20	American	United States Army	508.0	55.0	28.3	New York	San Francisco	General	459	10,282	7,027
City of Para	19	13.22	24	6.05	24	14.07	24	19.00	American	Pacific Mail Steamship Co	345.0	38.6	21.6	Cristobal	San Francisco	General	2,605	3,739	2,459
Santa Teresa	23	19.00	24	6.14	24	13.29	24	14.28	American	W. R. Grace & Co	360.2	51.6	25.2	New York	Valparaiso	General	3,995	5,726	4,086
Balboa	20	14.58	24	6.20	24	14.13	24	20.35	American	Colombian Maritime Co	190.0	29.1	13.0	Cristobal	Buenaventura	General	100	741	350
Tattnall[5]	23	15.27	24	8.40	24	14.52			American	United States Navy	310.0	31.0	10.6	Guantanamo	San Diego				
Gen. Graham[6]	23	13.45	24	9.07	24	16.30			American	United States Army				Cristobal	Balboa				
Wm. A. McKenney	24	12.41	25	6.20	25	14.11	25	15.05	American	Crowell & Thurlow	395.0	55.0	28.8	Charleston	Valparaiso	Coal	8,394	6,532	4,528
Devon	25	6.45	25	7.47	25	15.11	25	16.12	British	Federal Steam Navigation Co	473.0	59.0	29.0	New York	Sydney	General	9,920	9,944	7,000
Sudbury	22	9.52	25	9.46	25	16.43	25	21.20	American	United American S. S. Line	384.8	51.2	18.0	New York	San Francisco	General	3,646	5,213	3,625
Steel Voyager	25	13.15	25	13.35	25	20.25	26	11.52	American	United Steel Products Co	395.5	55.0	28.6	New York	Vancouver	Steel and general	8,890	7,285	5,256
Nevada	25	14.30	26	6.27	26	13.47	26	16.25	Danish	United Steamship Co	375.0	50.0	26.0	Norfolk	Arica	Coal	5,562½	4,990	3,558
Benj. Brewster	26	4.03	26	8.30	26	15.47	27	12.28	American	Standard Oil Co	411.6	53.4	24.0	Tampico	Pisagua	Petroleum	7,100	6,360	4,337
Deer Lodge	25	18.43	27	6.12	27	15.24	27	16.35	American	American Shipping Corp. (S. B.)	409.8	54.2	24.0	Jacksonville	Kobe	General	6,230	6,589	4,765
Neches[7]	27	9.05	27	9.31	27	16.57			American	United States Navy	475.0	56.0	26.0	Port Arthur	Balboa	Fuel oil	[8]7,304		
Ardmore	27	10.30	27	11.00	27	19.55	27	21.15	American	Standard Oil Co	449.5	59.6	25.5	Port Lobos	Pisagua	Crude oil	9,300	8,636	6,321
Baranga	27	11.00	27	11.20	27	18.34	27	19.32	British	Shaw Saville & Albion Co	478.0	63.2	27.0	London	Sydney	General	12,036	10,986	7,837
Santa Teela	27	5.30	27	12.52	27	20.31	27	21.15	American	W. R. Grace & Co	298.6	40.0	23.0	New York	Callao	General	3,113½	2,835	1,827

[1] Motor ship. [2] Cruiser. [3] Tug. [4] Transport. [5] Destroyer. [6] Mine planter. [7] Tanker. [8] 52,000 barrels.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

William H. Doheny	20	15.25	21	6.38	21	13.25	21	14.47	American	Pan-American Pet. Co	435.0	56.0	20.0	San Francisco	Tampico	Ballast				
Vinton County	20	16.25	21	6.48	21	15.40	22	17.55	American	Caribbean Steamship Co. (S. B.)	251.0	43.6	17.2	Guayaquil	Cristobal[9]	(10)	[14]1,180	2,866	1,828
Sylvan Arrow	21	3.00	21	7.30	21	16.20	21	17.12	American	Standard Transportation Co	467.6	62.7	21.0	San Francisco	Beaumont	Ballast		9,931	7,095
Corcovado	22	6.20	22	8.53	22	16.20	22	20.15	British	Pacific Steam Navigation Co	390.0	47.2	23.0	Talcahuano	Liverpool	General	[14]4,090	4,976	3,284
Gen. W. M. Graham[6]	15	13.49	23	6.45	23	13.45	24	9.07	American	United States Army				Balboa	Cristobal				
Guatemala	23	7.00	23	10.57	23	18.58			British	Pacific Steam Navigation Co	359.3	43.3	18.0	Valparaiso	Cristobal	General	1,904	4,210	2,744
Perene	23	13.15	24	6.38	24	16.37			Peruvian	Peruvian Line	284.1	39.1	20.6	Callao	Cristobal	(11)	[14]2,830		
West Cahokia	23	18.03	24	7.02	24	14.32	24	16.00	American	Sudden & Christensen (S. B.)	410.5	54.0	24.0	Portland	Lisbon	Wheat in sacks	6,000	6,622	4,882
Pallas	24	6.30	24	8.10	24	16.05	24	21.00	American	Swayne & Hoyt (S. B.)	380.5	53.1	24.6	San Francisco	Buenos Aires	General	5,334	5,659	4,034
Santa Elisa	24	7.30	24	9.01	24	16.02	24	17.30	American	W. R. Grace & Co	360.3	51.7	24.0	Valparaiso	New York	(12)	3,608	5,957	4,325
Caddo	21	19.00	24	13.29	24	20.25	24	20.25	American	Standard Oil Co	415.0	55.2	22.0	Antofagasta	Tampico	Ballast		6,438	4,391
Durango	24	11.30	24	13.39	25	0.15	25	12.20	Spanish	Cia. Naviera Vascongada	325.0	47.1	22.0	Iquique	Azores[9]	Nitrates	4,413	3,262	
San Juan	24	14.00	25	6.54	25	13.35			American	Pacific Mail Steamship Co	283.0	37.0	16.0	San Francisco	Cristobal	(13)	368	2,379	1,593
Wiltshire	25	1.30	25	8.17	25	15.50	25	19.40	British	Federal Steam Navigation Co	526.5	61.4	24.6	Sydney	Southampton	Frozen meat, etc.	3,700		
Clauscus	25	3.00	25	9.07	25	16.45	26	16.22	American	Green Star Corp. S. S.	409.8	51.2	22.0	Portland	Grangemouth	Railroad ties	5,996	6,581	4,741
Gera	25	12.05	25	13.54	25	21.35	25	21.35	British	Philipps, Phillipps & Co	473.0	60.6	27.6	Portland	Antwerp	Wheat	9,479	8,732	6,039
Jamaica	25	11.50	26	6.32	26	12.47			British	Pacific Steam Navigation Co	220.0	34.0	12.0	Tumaco	Cristobal	General	54	1,187	622
Lompoc	19	22.30	26	6.39	26	13.30	26	13.30	British	C. T. Bowring & Co	435.3	55.8	18.5	Taltal	Tampico	Ballast		7,488	5,342
Steel Maker	25	21.00	26	8.11	26	15.25	26	15.25	American	U. S. Steel Products Co	395.5	55.0	27.6	Tacoma	New York	Lumber, general	8,375	7,285	5,256
Eastern Belle	25	21.00	26	8.48	26	15.55	26	20.15	American	McCormick & McPherson (S.B.)	305.0	43.7	23.6	Tacoma	Nuevitas	Lumber	3,500	3,265	2,187
Manavi	26	5.40	26	8.58	26	16.40			British	Pacific Steam Navigation Co	216.0	35.1	13.6	Guayaquil	Cristobal	Produce	524½	1,357	884
Sciota[3]	16	15.48	26	9.49	26	16.35			American	United States Navy	155.0	30.0		Balboa	Cristobal				

[9] For orders. [10] Cocoa, ivory nuts, and quinine. [11] Sugar, copper, cotton, etc. [12] Nitrates, copper, tin ore, glue, quillay, lentils, and raisins. [13] General merchandise, hides, and copper. [14] Long tons.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Nov. 21	Calamares	United Fruit Co	Port Limon.
Nov. 21	Quilpue	Pacific Steam Navigation Co	London.
Nov. 21	Allianca	Panama Railroad Steamship Line	High seas.
Nov. 21	Santa Leonora	United States Army	New Orleans.
Nov. 22	Colnmbia	N. O. & S. A. S. S. Co	New Orleans and wayports.
Nov. 23	Tyne	Royal Mail Steam Packet Co	Hamburg.
Nov. 23	Pastores	United Fruit Co	New York via Habana.
Nov. 23	Parismina	United Fruit Co	New Orleans.
Nov. 24	Panama	Panama Railroad Steamship Line	New York via Haiti.
Nov. 24	Abangarez	United Fruit Co	New Orleans and wayports.
Nov. 24	Turrialba	United Fruit Co	New York via Kingston.
Nov. 25	Stuyvesant	Royal Netherlands W. I. Mail	Amsterdam.
Nov. 25	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Nov. 26	Corning	Standard Oil Co	Tampico.
Nov. 26	Antonio Lopez	Spanish Line	Habana.
Nov. 26	Logan[4]	United States Army	New Orleans.
Nov. 27	Crescent[15]	H. A. Bodden	Cayman Island via Serrana Bank.

*DEPARTURES.

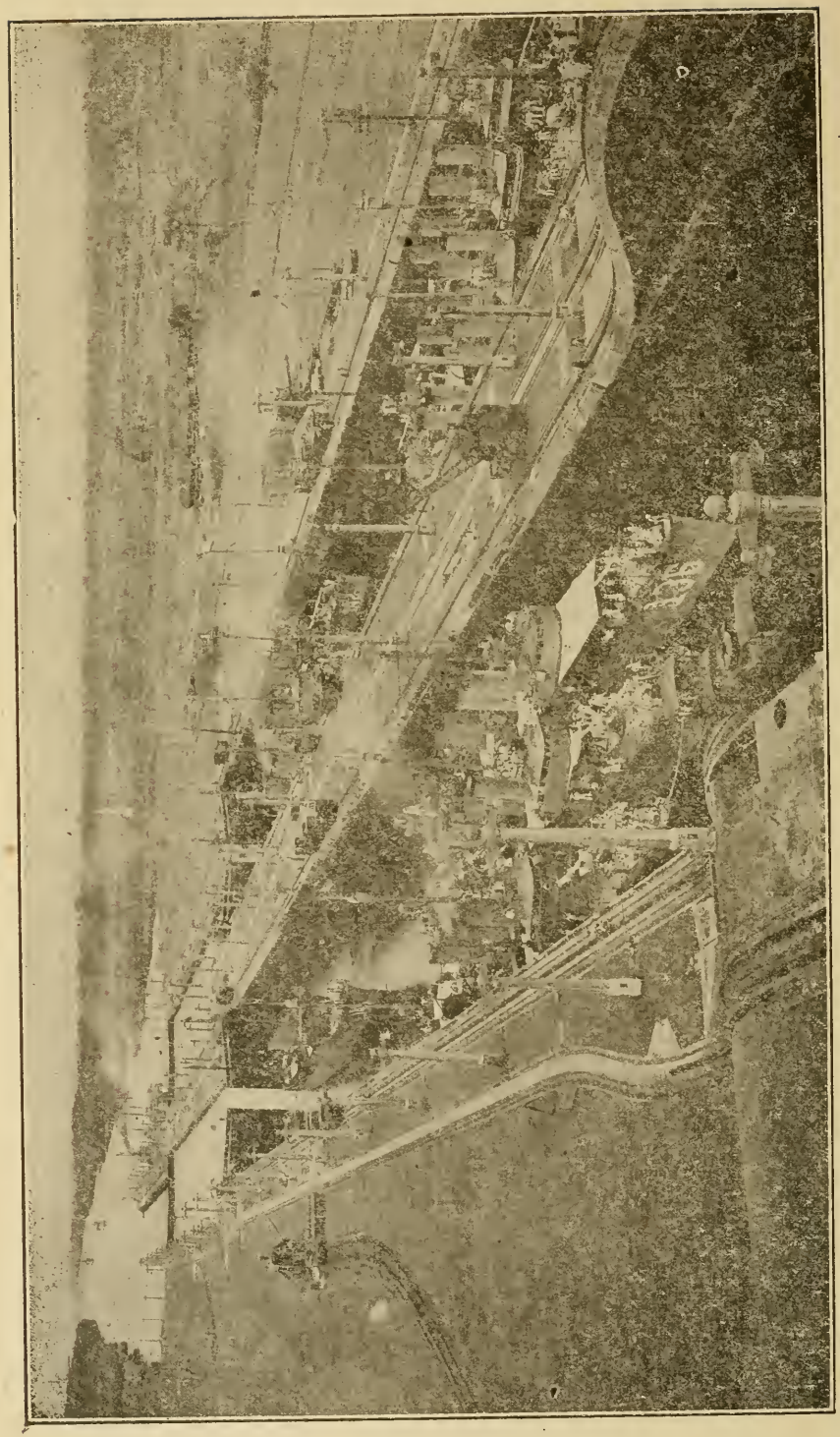
Date.	Vessel.	Line.	For—
Nov. 21	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Nov. 21	La Navarre	French Line	Puerto Colombia.
Nov. 21	Calamares	United Fruit Co	New York via Habana.
Nov. 21	Allianca	Panama Railroad Steamship Line	New York.
Nov. 22	Columbia	N. O. & S. A. S. S. Co	New Orleans and wayports
Nov. 22	Advance	Panama Railroad Steamship Line	New York via Haiti.
Nov. 24	Pastores	United Fruit Co	Port Limon.
Nov. 24	Abangarez	United Fruit Co	New Orleans.
Nov. 24	Quilpue	Pacific Steam Navigation Co	New York.
Nov. 25	Turrialba	United Fruit Co	New York via Colombia and Kingston.
Nov. 25	Parismina	United Fruit Co	New Orleans via Bocas del Toro and Habana.
Nov. 26	Stuyvesant	Royal Netherlands W. I. Mail	Cartagena.
Nov. 27	Santa Leonora	United States Army	New Orleans.
Nov. 27	Lake Flynus	United States Shipping Board	Puerto Cabello.

[15] Schooner.

PORT OF BALBOA.

Nov. 21	Guardian[16]	All-America Cables Co	Callao.	Nov. 24	Griffeo	James Griffiths & Son	Callao.
Nov. 24	Griffson[17]	James Griffiths & Son	Portland.				
Nov. 24	Griffeo	James Griffiths & Son	Port Townsend.				

[16] Cable ship. [17] Barge. *Other than ships passing through the Canal. Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.



Ten destroyers being lifted simultaneously in middle chambers of Gatun Locks during the passage of the Pacific Fleet through the Canal. Each of these vessels is 310 feet in length by 30 feet 11¾ inches in breadth on the load water line (*see* page 200).

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending November 27, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Calamares	United Fruit Co	November 21	November 21	5	43
La Navarre	French Line		November 21		80
Caribbean	Panama Railroad Cattle Industry		November 21		12
La Paz	Pacific Steam Navigation Co		November 21		71
Advance	Panama Railroad Steamship Line		November 22		333
Vinton County	Caribbean Steamship Co	November 21	November 22	60	566
Quilpue	Pacific Steam Navigation Co	November 21	November 25	16	1,750
Guatemala	Pacific Steam Navigation Co	November 23		1,904	
Tyne	Pacific Steam Navigation Co	November 23		450	
Bologna	Italian Steamship Co		November 23		5
Pastores	United Fruit Co	November 23	November 24	833	98
City of Para	Pacific Mail Steamship Line		November 24		2,605
Balboa	Colombian Maritime Co		November 24		78
Parismina	United Fruit Co	November 23	November 25	969	144
Abangarez	United Fruit Co	November 24	November 24	1½	3
Panama	Panama Railroad Steamship Line	November 24	November 27	3,015	552
Turrialba	United Fruit Co	November 24	November 25	10	233
Perne	Peruvian Steamship Co	November 24		2,830	
Stuyvesant	Royal Netherlands W. I. Mail	November 25	November 26	29	500
Caribbean	Panama Railroad Cattle Industry	November 25		350	
Deer Lodge	American Shipping Corporation	November 25	November 27	120	(2)
San Juan	Pacific Mail Steamship Co	November 25		368	
Jamaica	Pacific Steam Navigation Co	November 26		54	
Manavi	Pacific Steam Navigation Co	November 26		524½	
Antonio Lopez	Spanish Line	November 26		473½	
Corning	Standard Oil Co	November 26		7,500	
[1] Crescent	H. A. Bodden	November 27		28	
Point Bonita	Pacific Mail Steamship Co	November 27		752	

[1] Schooner. [2] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending November 27, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Guatemala	Pacific Steam Navigation Co	November 23	November 23	18	
City of Para	Pacific Mail Steamship Co	November 24	November 24		2
Griffson	James Griffiths & Sons	November 24		3,100	
San Juan	Pacific Mail Steamship Co	November 24	November 25	280	
Manavi	Pacific Steam Navigation Co	November 26	November 26	2	
Jamaica	Pacific Steam Navigation Co	November 25	November 26	57	
Point Bonita	Pacific Mail Steamship Co	November 27		466	

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended November 27:

Barge *No. 131*, general repairs; steamship *Marne*, general repairs and rebuilding; dredge *No. 83*, general repairs; launch *Captain Wilhelm*, hull repairs and installation of new engine; steamship *General H. F. Hodges*, general repairs; tug *Bohio*, general repairs and rebuilding; launch *Limon*, general overhauling; mine yawl *No. 253*, general repairs; steamships *Olockson*, pumping out and trimming ship; *Richconcal*, repairs to boilers and miscellaneous small repairs; *Guardian*, docking, staging, and cleaning, painting bottom and miscellaneous small repairs; tug *Empire*, repairs to hull; steamships *Lompoc*, docking, staging, cleaning, and painting bottom and miscellaneous engineer's department repairs; *Caddo*, miscellaneous repairs; barge *D. F. Hanlon*, docking, staging and cleaning, painting bottom, and cross-connecting oil tanks; launches *Pilot*, repairs to hull; *Santa Rita*, rebuilding; barge *Griffson*, miscellaneous repairs to pumps and pipe work.

The following vessels were at the Cristobal shops for repairs during the week ended November 29:

Steamships *Panama*, miscellaneous repairs and painting to engine, deck, and steward departments; *Guatemala*, repair boiler, clear tubes of salt, make H. P. rings, repair steering engine; U. S. S. *Turkey*, remetal and rebore crank brass, repair condenser pump, windlass, etc.; steamships *Corning*, repair fire pump, anchor windlass, and boiler, chip propeller; *San Juan*, repair shell plate, windlass, capstan, etc.;

Perene, calk deck, repair hatches, shell of ship, etc.; U. S. S. Eagle *No. 32*, clean and paint, change propeller, weld hull, etc.; U. S. S. C. *No. 287*, clean hull, repair keel and sheathing, grind in sea valves, etc.; launch *Pequeni*, overhaul both engines; U. S. S. C. *No. 285*, overhaul main and auxiliary engine; S. P. *No. 2232*, general overhaul and alterations; steamships *Pastores*, *Tyne*, *Acajutla*, *Parismina*, *Caribbean*, *Turrialba*, *Stuyvesant*, *Deer Lodge*, craneboat *La Valley*, steamships *Jamaica*, *Point Lobos*, *Mexico*, *Lake Ennis*, *Arawa*, *Europa*, and *Eldorado*, minor repairs.

Savannah and Oakland Included in Coastwise Service.

Savannah, Ga., and Oakland, Cal., have been made ports of call in the United States coastwise service of the Pacific Mail Steamship Company between Baltimore and San Francisco, which makes calls at Habana, Matanzas, San Juan, Porto Rico, and Cristobal, on the Atlantic side; and Balboa and the principal ports of Central America on the Pacific side.

Pacific Steam Navigation Company Using Motor Ships.

The motor ship *La Paz* of the Pacific Steam Navigation Company, which passed through the Canal on November 21 on the way from New York to Valparaiso, continuing her maiden voyage from Glasgow, is the first of 3 motor ships which the company will place in the service. Two others, the *Lobos* and the *Losada*, are building. They are to have the same dimensions as the *La Paz*, of which the length between perpendiculars is 405 feet, beam 54 feet, gross tonnage 6,800, and deadweight capacity 9,190 tons.

The Pacific Steam Navigation Company has now about 20 steamships in the service to which the motor ships are to be added. The vessels ply between England and the west coast of South America, some of the ships going by way of New York and others direct.

International Mercantile Marine Tours.

The International Mercantile Marine has advised its local agents on the Isthmus that the steamships *Megantic* of the White Star Line and *St. Paul* of the American Line are scheduled to arrive at Cristobal with cruises of tourists as follows: *St. Paul*, January 26; *Megantic*, February 2; *St. Paul*, February 15; *Megantic*, March 4 and April 4.

Press reports indicate that there may be other cruises under the management of the International Mercantile Marine through the Caribbean area, including calls at the Canal, but definite advice on them has not been received.

Pacific Steam Navigation Company Carrying Passengers in New York-Guayaquil Service.

The Pacific SteamNavigation Company has begun passenger service as well as cargo service on the line which it operates between New York and Colombian and Ecuadorian ports. Passengers are carried on the steamships *Quillota* and *Quilpue*, the other vessels carrying cargo only. The itinerary includes Cristobal, Buenaventura, Bahia, Esmeraldas, Manta, and Guayaquil, and return by way of these ports to New York.

The *Quillota* and the *Quilpue* were previously used on the Royal Mail Steam Packet Company's line between London and the West Indies.

Cable Addresses of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Scheduled Sailing of First of Pacific Mail's New Liners.

The Pacific Mail Steamship Company advises that it expects the liner *Golden State* will sail from New York for San Francisco on February 15. This will be the first of the five 535-foot vessels which the company will receive from the Shipping Board. It is reported that the *Golden State* will have a full passenger list and will make a stop in Canal waters, giving the passengers opportunity to go ashore.

Handling of Passengers, Cargo, Mail, or Baggage by Ships at Coaling Plants.

It happens occasionally that a vessel going to one of the coaling plants of the Canal for fuel, and not expecting to tie up at one of the regular cargo piers, desires to discharge a few passengers or a small quantity of cargo or mail; and question arises as to the wharfage charges which may be made against the vessel, no wharfage being charged for fueling.

The rule is that when a vessel receives or discharges at the coaling plants, at either Cristobal or Balboa, one or more tons of cargo, 10 or more bags of mail, or 3 or more passengers, a charge for wharfage will be made at the rate provided in The Panama Canal Tariff, the schedule of rates for supplies and services furnished to shipping and allied interests at the Panama Canal.

The old rate of 40 cents per ton for right of basin has been withdrawn from vessels lying at the coaling wharves; in lieu thereof, when floating equipment or labor is furnished to assist in the handling of cargo, mail, baggage, or passengers at the coaling plants, charges will be made for such services at the rates provided in the Tariff.

Licenses for Operators of Motorcycles.

Executive Order No. 3347, published as Canal circular No. 601-114, establishing that the word "automobile," wherever used in the Executive Order dated October 9, 1918, shall be construed to include any and all motor-propelled vehicles, and shall specifically include motorcycles, will take effect on December 24, 1920. This is 30 days from and after its publication in THE PANAMA CANAL RECORD dated November 24, 1920.

The Chief of the Police and Fire Division advises that owners or drivers of motorcycles should secure their licenses before December 24, 1920. The charge is the same as for other chauffeurs' licenses, $1, and the licenses will similarly be valid indefinitely without further charge unless revoked for cause. There is no charge for the licenses issued to operators of Government motorcycles.

Triple Execution of Murderers.

Eduardo Lopez, Daniel McCloud, and James Williams were executed simultaneously, by hanging, at 12.35 p. m., December 1, at Gamboa Penitentiary, for the murder of William Blackett, watchman at the Panama Railroad explosive storehouse, at the Mount Hope borrow pit, on May 7, 1920.

Library Hours.

Beginning November 29, the hours during which the central library at Balboa Heights is open are from 8 a. m. to 5 p. m., continuously, daily except Sundays and holidays.

The branch libraries in the clubhouses are open from 4 to 9 p. m., daily except Sundays and holidays, for the loaning of books; the reading rooms containing periodicals are accessible at all hours during which the clubhouses are open.

Official Circular.

Requests for Additions to the Standard Stock Catalogue.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., November 19, 1920.

To HEADS OF DEPARTMENTS AND DIVISIONS:

It is directed that hereafter form 6222 (Request for Additions to the Standard Stock Catalogue) be submitted in quintuplicate to the General Storekeeper instead of in triplicate as provided in paragraph 8 of Circular dated January 30, 1920, regarding standard stock material.

By direction of the Governor.

C. A. McILVAINE,
Executive Secretary.

Cable Notice.

The All-America Cables, Inc., has advised "Normal route to Porto Rico, St. Thomas, St. Croix, St. Kitts, Antigua, Guadeloupe, Dominica, St. Lucia, St. Vincent, Barbados, Grenada, Trinidad, and British Guiana interrupted; messages for Porto Rico and Guadeloupe may be accepted at normal rates, but subject to delay. Messages for St. Thomas and St. Croix are subject to delay and the rate is increased 28 cents per word. Messages for the other islands named are also subject to delay and the rate is increased 30 cents per word."

Additions to Commissary Stock.

Dry Goods Section.

Blouses, boys', sport style, short sleeves, roll collar, ea..... $1.20
Blouses, boys', white, pongette, ea..... 1.55

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings, or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
John Simpson.....	36536	Jamaica.....	Panama.....	Mechanical Division...	November 11, 1920.
Legamend Manuel . .	20763	Martinique.....	Camp Bierd.....	Health Dept.....	November 14. 1920.

COMMISSARY NOTES.

Kimonos.

A shipment of 1,200 Japanese kimonos was received and distributed to the line stores this week.

Oil Stoves.

Drums and ovens for "New Perfection" oil stoves, delivery of which it was impossible to obtain from manufacturers for some time, have now been received and are on sale in the retail commissaries.

Electric Irons.

Commissary customers who have been inquiring regarding the receipt of electric irons, which have been out of stock for some time, will be interested to know that a shipment containing 340 of these appliances was received last week. The irons may now be purchased in the line stores.

Minton Chinaware.

Small quantities of Minton chinaware in the wide gold band, blue and gold, and red flower patterns arrived this week and have been shipped to the line commissaries. These items are in considerable demand and patrons are urged to purchase without delay.

Calendars.

Christmas gifts which will be appreciated for the valuable information contained are calendars of salads, of dinners, and of sandwiches and beverages, decorated and ready to hang on the wall for convenient reference, which are sold in the line commissaries for 55 cents.

Neckties.

There has just been received and distributed to the line stores, a stock of ties that are excellent for Christmas trade. These are in plain silk for boys, and brocaded silk and specially woven designs for men. The patterns and weaves are varied and unique. Prices range from 44 cents to $2.65 each.

THE PANAMA CANAL RECORD

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Volume XIV. Balboa Heights, C. Z., December 8, 1920. No. 17.

From New York to Argentina by Way of the Canal.

The steamship *Lake Ennis* passed through the Canal on November 30, carrying 2,700 tons of coal from New York to Santa Cruz, Argentina. Santa Cruz is near the mouth of the Santa Cruz River, in the territory of that name which forms the southern part of Patagonia, and is about 230 nautical miles to the northeast of Punta Arenas. The distance from New York to Santa Cruz around the east coast of South America, direct from New York to Montevideo, Uruguay, thence to Santa Cruz, is 6,841 miles. The distance by way of the Canal, via Talcahuano and Punta Arenas, is approximately 6,321 miles. The Canal route is about 520 miles shorter.

The distance from New York to Punta Arenas, about midway of the Strait of Magellan, is 6,947 miles by the route east of South America; by the Canal the distance is 5,960 miles. The difference in favor of the Canal is 987 miles. The point of equidistance by either route is 6,453½ miles from New York, or about 493 miles to the northeast of Punta Arenas, and about 696 miles south of Montevideo, for direct sailings. For vessels making the customary way calls. Bahia Blanca, Argentina, near latitude 40° S., may be considered equidistant from New York by the east coast route and by the Canal.

Through Bills of Lading Between Mississippi Valley and Pacific Ports.

Announcement has been made of an arrangement between the Pacific Gulf Caribbean Line, operating a coastwise service through the Canal, and the Warrior River Service, operating on the Mississippi River, for joint handling of shipments on through bill of lading between Pacific ports of the United States and inland ports on the Mississippi and its tributaries.

In correspondence in earlier times between The Panama Canal and commercial organizations of inland cities of the Mississippi Valley some discontent was expressed by the latter with the effects of the Canal, which they said was benefiting the seaboard areas out of proportion to its usefulness to the Mississippi Valley industrial centers. Subsequently, however, the river traffic has developed considerably, and with the growing traffic through New Orleans the Canal may be expected to be of more direct benefit to the central portion of the United States.

Work of the "Favorite" Commended by Agent of the "Koyo Maru."

The Grace Log for November contains an article by the Panama agent of the Toyo Kisen Kaisha on the salvaging of the steamship *Koyo Maru* which grounded on Serrana Bank on June 29 as previously noted in THE PANAMA CANAL RECORD. In recounting the rescue of the ship, in which The Panama Canal salvage vessel *Favorite* was used,

the article comments: "This experience would make it advisable to notify all steamship companies and underwriters of the valuable assistance The Panama Canal can give in salvaging vessels."

CANAL WORK IN OCTOBER.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of October, 1920:

BALBOA HEIGHTS, C. Z., November 30, 1920.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of The Panama Canal for the month of October, 1920.

CANAL TRAFFIC.

The number of ocean-going commercial ships passing through the Canal during the month was 238, in addition to which there were 26 United States government vessels including 1 battleship, 2 cruisers, 2 transports, 10 Eagle boats, 2 destroyers, 3 mine sweepers, 1 gunboat, 1 Navy supply ship, and 4 colliers with coal for the United States Navy. A detailed classification of the month's traffic is included with this report.

The Panama Canal net tonnage of the 238 commercial vessels aggregated 935,579 tons, being 73,206 tons less than for the preceding month. Their registered gross tonnage was 1,190,936, and registered net tonnage, 754,540. The total cargo carried was 991,066 tons of 2,240 pounds, being 18,491 tons less than for September. Of this total, 3,143 tons were carried as deck cargo. The total number of vessels and craft of all kinds through the Canal was 271, as compared with 274 for last month. The total tolls earned were $911,854.58, as compared with $1,010,166.38 for September. Ocean-going commercial ships passing through the Canal averaged 7.7 per day, and the average tolls per vessel, $3,831.32. Tolls collected amounted to $911,854.58.

The average tonnage, Panama Canal measurement, for commercial vessels, was 3,931; United States net equivalent, 3,202; registered gross, 5,004; and registered net, 3,170. The average cargo carried by the laden vessels was 4,164 tons.

The United States coastwise trade for October included 20 vessels with a total Panama Canal net tonnage of 85,915, and cargo of 79,085 tons. There were 13 vessels from the Atlantic to the Pacific with a total tonnage of 51,477, and cargo of 44,659 tons; and from the Pacific to the Atlantic, 7 vessels with a total tonnage of 34,438 and cargo of 34,426 tons.

PRINCIPAL COMMODITIES.

Bulk shipments of the different principal commodities included in the October traffic were:

FROM ATLANTIC TO PACIFIC.

Commodity.	From—	To—	No. of cargoes.	Tons.	Total tons.
Coal	Norfolk	Antofagasta	2	15,370	.....
Coal	Norfolk	Iquique	2	13,038	.....
Coal	Norfolk	Auckland	1	3,954	32,362
Coal	Philadelphia	Callao	1	4,324	.....
Coal	Philadelphia	Valparaiso	1	3,289	7,613
Coal	Newport News	Antofagasta	1	7,018	7,018
Coal	Barry	Auckland	1	5,996	5,996
Coal	Baltimore	Callao	1	4,968	4,968
Total			10	57,957	57,957
Fuel oil	Tampico	Pisagua	2	13,781	.....
Fuel oil	Tampico	Balboa	1	10,500	.....
Fuel oil	Tampico	Tocopilla	1	9,500	.....
Fuel oil	Tampico	Iquique	1	9,200	.....
Fuel oil	Tampico	Antofagasta	1	8,200	.....
Fuel oil	Tampico	Taltal	1	5,180	56,361
Fuel oil	Mata Redonda	Pisagua	1	8,300	8,300
Total			8	64,661	64,661
Refined oils	Philadelphia	Chefoo	1	7,000	.....
Refined oils	Philadelphia	Dairen	1	6,800	13,800
Refined oils	Beaumont	Woosung	1	10,640	.....
Refined oils	Beaumont	Hongkong	1	8,317	18,957
Refined oils	New York	Melbourne	1	7,000	7,000
Total			5	39,757	39,757

FROM ATLANTIC TO PACIFIC—continued.

Commodity.	From—	To—	No. of cargoes.	Tons.	Total tons.
Steel and iron	New York	Shanghai	1	7,000	.....
Steel and iron	New York	Vancouver	1	5,954	.....
Steel and iron	New York	Valparaiso	1	1,050	14,004
Steel and iron	Baltimore	Yokohama	1	8,000	8,000
Steel and iron	Mobile	Shanghai	1	6,938	6,938
Total			5	28,942	28,942
Sulphur	Sabine	San Pedro	1	4,000	4,000
Silver sand	Antwerp	San Francisco	1	3,000	3,000

FROM PACIFIC TO ATLANTIC.

Nitrate	Iquique	Norfolk	2	8,012	.....
Nitrate	Iquique	La Pallice	1	7,069	.....
Nitrate	Iquique	Azores[1]	1	5,240	.....
Nitrate	Iquique	Charleston	1	4,114	.....
Nitrate	Iquique	New Orleans	1	3,850	.....
Nitrate	Iquique	Christiania	1	450	28,735
Nitrate	Taltal	New York	2	9,960	.....
Nitrate	Taltal	Great Britain	1	8,060	.....
Nitrate	Taltal	Savannah	1	6,562	.....
Nitrate	Taltal	Azores[1]	1	5,000	29,522
Nitrate	Valparaiso	New York	2	10,550	.....
Nitrate	Valparaiso	Azores[1]	1	6,621	.....
Nitrate	Valparaiso	St. Thomas	1	5,000	22,171
Nitrate	Talcahuano	Hamburg	1	9,135	.....
Nitrate	Talcahuano	Bordeaux	1	5,100	14,235
Nitrate	Antofagasta	Charleston	1	10,000	.....
Nitrate	Antofagasta	Baltimore	1	3,749	13,749
Nitrate	Tocopilla	Alexandria	1	7,622	.....
Nitrate	Tocopilla	St. Thomas	1	6,118	13,740
Nitrate	Caleta Colosa	Charleston	1	6,315	6,135
Nitrate	Arica	Great Britain	1	6,010	6,010
Nitrate	Caleta Buena	Marseilles	1	5,800	5,800
Nitrate	San Antonio	New Orleans	1	3,560	3,560
Total			26	143,837	143,837
Wheat	Portland	London	1	10,227	.....
Wheat	Portland	Cardiff	1	8,891	.....
Wheat	Portland	Barry	1	8,769	.....
Wheat	Portland	Norfolk	1	8,088	.....
Wheat	Portland	Belfast	1	7,014	.....
Wheat	Portland	Cork	1	6,300	49,289
Wheat	Seattle	Limerick	1	7,300	7,300
Wheat	San Francisco	Gibraltar	1	5,336	5,336
Total			8	61,925	61,925
Lumber	Seattle	London	1	7,341	.....
Lumber	Seattle	Grangemouth	1	6,823	.....
Lumber	Seattle	Philadelphia	1	4,635	18,799
Lumber	Westminster	Immingham	1	4,720	4,720
Lumber	Portland	Habana	1	750	750
Lumber	Puntarenas	Cristobal	2	884	884
Total			7	25,153	25,153
Cold storage, food products	Wellington	London	1	5,308	5,308
Cold storage, food products	Melbourne	United Kingdom	1	4,868	4,868
Cold storage, food products	Auckland	London	1	4,459	4,459
Cold storage, food products	New Plymouth	London	1	3,400	3,400
Total			4	18,035	18,035
Flour	Astoria	Great Britain	1	9,793	9,793
Flour	San Francisco	Bergen	1	8,610	8,610
Flour	Portland	Hamburg	1	5,183	5,183
Total			3	23,586	23,586
Barley	San Francisco	Hull	2	10,508	.....
Barley	San Francisco	London	1	4,450	14,958
Total			3	14,958	14,958

[1] For orders.

FROM PACIFIC TO ATLANTIC—continued.

Commodity.	From—	To—	No. of cargoes.	Tons.	Total tons.
Sugar	Java	New York	1	7,178	7,178
Sugar	Callao	New York	1	2,200	2,200
Total			2	9,378	9,378
Pineapples	Hawaii	New York	2	12,371	12,371
Lubricating oil	San Francisco	Philadelphia	1	11,000	11,000
Chrome ore	Pasgoumene	New York	1	7,332	7,332
Diesel oil	San Francisco	Mata Redonda	1	6,000	6,000
Coal	British Colombia	Gothenburg	1	4,500	4,500
Gas oil	San Francisco	Copenhagen	1	2,640	2,640
Coffee	Buenaventura	Cristobal	1	51	51

LATIN-AMERICAN TRAFFIC.

Commercial vessels, southbound through the Canal, engaged in Latin-American trade, for October, were classified as follows:

Nationality.	No. of ships.	Registered gross tonnage.	Registered net tonnage.	Panama Canal net tonnage.	Cargo.
					Tons.
British	24	91,703	54,350	66,308	59,359
United States	21	98,471	66,386	76,719	97,510
Spanish	5	16,987	10,829	12,886	Ballast
Norwegian	4	20,546	12,927	16,056	28,591
Dutch	2	11,312	7,140	11,200	3,988
Peruvian	2	7,922	3,941	5,364	4,085
Italian	1	7,870	4,547	4,915	1,000
French	1	5,796	3,689	4,170	1,542
Japanese	1	6,079	3,850	4,440	7,018
Belgian	1	5,072	3,094	4,049	5,700
Swedish	1	3,745	2,858	4,019	3,689
Chilean	1	2,553	1,600	2,577	527
Costa Rican	1	158	93	185	Ballast
Panamanian	1	16	16	14	Ballast
Totals	66	278,230	175,320	212,902	204,009
Totals for September	66	292,299	177,179	219,045	176,578
Totals for October, 1919	44	191,549	118,827	143,996	117,387

Eleven of the above vessels, with an aggregate Panama Canal net tonnage of 25,225, were in ballast; 7 from European ports, 2 from Cristobal, 1 from the United States, and 1 from the Canal Zone. This traffic is further classified in the following table:

No. vessels	Registry	Commodity.	Tons of cargo.	Origin of cargo.
	To west coast of South America—			
6	United States	Coal	36,021	East coast of United States.
4	United States	General	14,689	East coast of United States.
2	United States	Iron and steel	3,540	East coast of United States.
1	United States	Coke, mining material	5,161	East coast of United States.
1	United States	Ballast		East coast of United States.
4	British	General	12,343	East coast of United States.
1	British	Coke and general	3,444	East coast of United States.
1	Japanese	Coal	7,018	East coast of United States.
1	Belgian	Coal and general	5,700	East coast of United States.
1	Norwegian	Coal and coke	3,988	East coast of United States.
22			91,884	East coast of United States.
5	British	General	13,872	Great Britain.
2	British	Ballast		Great Britain.
2	Spanish	Ballast		Great Britain.
3	Spanish	Ballast		Spain.
2	Dutch	General	3,988	Germany.
1	Norwegian	General and coal	5,923	Norway.
1	Swedish	General	3,689	Sweden.
1	French	General	1,542	France.
1	Italian	General	1,000	Italy.
18			30,014	From European ports.

No. vessels	Registry.	Commodity.	Tons of cargo.	Origin of cargo.
	To west coast of South America—contd.			
8	British	General	8,835	Cristobal, C. Z.
2	Peruvian	General	4,085	Cristobal, C. Z.
1	United States	General	242	Cristobal, C. Z.
1	United States	Ballast		Cristobal, C. Z.
1	Chilean	General	527	Cristobal, C. Z.
1	Costa Rican	Ballast		Cristobal, C. Z.
14			13,689	Cristobal, C. Z.
3	United States	Fuel oil	25,281	East coast of Mexico.
2	Norwegian	Fuel oil	18,700	East coast of Mexico.
2	British	Fuel oil	10,180	East coast of Mexico.
7			54,161	East coast of Mexico.
	To west coast of Central America—			
2	British	General	1,685	Cristobal, C. Z.
	To Panama Canal Zone—			
1	United States	Fuel oil	10,500	East coast of Mexico.
1	Panamanian	Ballast		Local.
	To west coast of United States—			
1	United States	General	2,076	Cristobal, C. Z.
66	Total Latin-American traffic, S. bound.		204,009	

The Latin-American traffic, northbound through the Canal, for October, is classified in the following tabulation:

Nationality.	No. of ships.	Registered gross tonnage.	Registered net tonnage.	Panama Canal net tonnage.	Tons of cargo.
United States	26	120,892	76,477	91,214	68,407
British	24	93,475	56,167	70,048	56,156
Norwegian	6	26,368	16,830	19,962	17,000
Spanish	3	11,962	8,277	8,737	15,232
German	4	15,961	9,954	12,788	16,010
Peruvian	3	12,666	6,614	8,315	9,478
French	2	11,606	7,301	8,322	13,269
Chilean	2	6,367	3,888	5,645	1,193
Dutch	1	6,899	4,417	6,653	9,720
Danish	1	4,465	2,853	3,515	6,400
Japanese	1	3,857	2,364	3,033	5,240
Costa Rican	1	158	93	185	192
Totals	74	314,676	195,235	238,417	218,297

Seventeen of the above vessels were in ballast, 5 of which were tugs. Of the remaining 12, 11 were tankers returning to the east coast of Mexico, and the other an empty collier returning to the United States after discharging its cargo on the Canal Zone.

No. of vessels	Registry.	Commodity.	Cargo.	Destined to—
	From west coast of South America—		*Tons.*	
7	United States	Nitrate	32,934	East coast of United States.
2	United States	Nitrate, general	11,350	East coast of United States.
1	United States	Nitrate, copper	8,721	East coast of United States.
1	United States	Sugar, ores	3,281	East coast of United States.
1	United States	Nitrate, ore, sugar	2,900	East coast of United States.
1	United States	General	1,078	East coast of United States.
1	British	Nitrate	4,712	East coast of United States.
2	British	General	2,858	East coast of United States.
1	Norwegian	Nitrate	10,000	East coast of United States.
1	Danish	Nitrate	6,400	East coast of United States.
1	Spanish	Nitrate	4,114	East coast of United States.
19			88,348	East coast of United States.
6	British	General	4,071	Cristobal, C. Z.
1	British	Coffee	51	Cristobal, C. Z.
3	Peruvian	General	9,478	Cristobal, C. Z.
2	United States	General	1,338	Cristobal, C. Z.
1	United States	Ballast		Cristobal, C. Z.
2	Chilean	General	1,193	Cristobal, C. Z.
15			16,131	Cristobal, C. Z.

No. of vessels	Registry.	Commodity.	Cargo.	Destined to—
	From W coast of South America—contd.			
3	British	General	14,111	Great Britain.
1	British	Nitrate	8,000	Great Britain.
1	British	Nitrate, general	7,392	Great Britain.
2	British	Ballast		Great Britain.
1	German	Nitrate	6,010	Great Britain.
1	French	Nitrate	7,069	France.
1	French	Nitrate, general	6,200	France
1	Norwegian	Nitrate	5,800	France.
1	Norwegian	Nitrate	450	Norway.
1	Dutch	Nitrate, general	9,720	Germany.
13			64,752	European ports.
1	German	General	5,000	Jamaica.
1	British	Ballast		Jamaica.
1	German	Ballast		Jamaica.
1	Spanish	Nitrate	6,118	St. Thomas.
1	German	Nitrate	5,000	St. Thomas.
5			16,118	West Indies.
4	United States	Ballast		Mexico.
2	British	Ballast		Mexico.
2	Norwegian	Ballast		Mexico.
8				Mexico.
1	British	Nitrate	7,622	Africa.
1	British	Nitrate	6,621	Azores.[1]
1	Japanese	Nitrate	5,240	Azores.[1]
1	Spanish	Nitrate	5,000	Azores.[1]
	From Central American ports—			
2	British	General	718	Cristobal, C. Z.
1	Costa Rican	Logs	192	Cristobal, C. Z.
	From Balboa, C. Z.—			
1	United States	Ballast		United States.
1	United States	Ballast		Mexico.
	From west coast of United States—			
1	United States	Diesel oil	6,000	East coast of Mexico.
2	United States	Ballast		East coast of Mexico.
1	United States	Logs and hides	805	Cristobal, C. Z.
1	Norwegian	Lumber	750	Habana, Cuba.
74	Total Latin-American traffic, N. bound		218,297	

[1] For orders.

Forty-three of the vessels passing through the Canal during October were under control of the United States Shipping Board, combining a total Panama Canal net tonnage of 186,899, and cargo of 225,437 tons. Twenty-one were southbound, with a Panama Canal net tonnage of 92,523, and cargo of 100,034 tons; 22 were northbound, with a Panama Canal net tonnage of 94,376, and cargo of 125,403 tons. In addition to the above, 3 vessels under control of the Shipping Board, with a combined Panama Canal net tonnage of 15,137, and carrying 21,982 tons of fuel for the Army and Navy, transited the Canal southbound during the month.

Statements attached to this report show the distribution of the cargo through the Canal, for October (*see* pages 236 and 237); the following tabulation gives the classification of the traffic over the principal trade routes:

	Total vessels.			Vessels in ballast.	
	Vessels.	Panama Canal net tonnage.	Cargo.	Vessels.	Panama Cana net tonnage.
Atlantic to Pacific.					
United States to west coast of South America	22	83,306	91,884	1	8,063
East coast of United States to Far East	18	91,990	125,642		
Europe to west coast of South America	16	60,576	30,014	5	11,018
United States coastwise	13	51,477	44,659		
Cristobal to west coast of South America	14	20,644	13,689	2	927
East coast of United States to Australasia	10	43,275	65,355		
Mexico to west coast of South America	7	34,046	54,161		
Europe to west coast of United States	6	29,339	8,981	3	16,441
Europe to Australasia	5	36,105	32,967		
Canary Islands to west coast of South America	2	5,201		2	5,201

	Total vessels.			Vessels in ballast.	
	Vessels.	Panama Canal net tonnage.	Cargo.	Vessels.	Panama Canal net tonnage.
Atlantic to Pacific—Continued.					
Cristobal to west coast of Central America	2	1,398	1,685	.....	.....
Mexico to Balboa, C. Z.	1	5,554	10,500	.....	.....
East coast of United States to west coast of Canada	1	5,448	7,100	.....	.....
Cristobal to west coast of United States	1	2,163	2,076	.....	.....
Cristobal to Balboa	1	14	.....	1	14
Totals	119	470,536	488,713	14	41,664
Totals, last month	125	504,349	444,217	25	86,822
Totals, October, 1919	73	281,903	268,131	.....	.....
Pacific to Atlantic.					
West coast of United States to Europe	22	108,076	156,379	.....	.....
West coast of South America to east coast of United States	20	63,847	88,348	1	51
West coast of South America to Cristobal	16	26,819	21,131	1	99
West coast of South America to Europe	13	52,725	64,752	2	213
West coast of South America to Mexico	8	40,954	.....	8	40 954
United States coastwise	7	34,438	34,426	2	12,294
Australasia to Europe	5	32,338	23,686	.....	.....
Far East to east coast of United States	4	16,686	28,370	.....	.....
West coast of United States to east coast of Mexico	3	16,203	6,000	2	10,884
Australasia to east coast of United States	3	16,486	21,879	.....	.....
West coast of South America to Azore Islands[1]	3	10,493	16,861	.....	.....
West coast of South America to West Indies (exclusive of Cuba and Porto Rico)	3	7,922	11,118	1	149
West coast of Central America to Cristobal	3	1,583	910	.....	.....
Hawaii to east coast of United States	2	8,276	12,371	.....	.....
Balboa, C. Z., to east coast of United States	1	7,008	.....	1	7,008
Vladivostok to Europe	1	6,201	945	.....	.....
Balboa, C. Z., to Mexico	1	5,553	.....	1	5,553
West coast of South America to Africa	1	4,067	7,622	.....	.....
West coast of Canada to Europe	1	4,125	6,000	.....	.....
West coast of United States to Cristobal	1	742	805	.....	.....
West coast of United States to Cuba	1	496	750	.....	.....
Totals for October	119	465,043	502,353	19	77,305
Totals last month	130	504,436	565,340	16	52,632
Totals for October, 1919	123	388,197	437,750	.....	.....

[1]For orders.

SERVICE TO CANAL SHIPPING.

Miscellaneous repairs were made at Cristobal and Balboa shops and dry docks, on 98 vessels and craft during October; 67 at Cristobal, and 31 at Balboa. Of these 22 were dry-docked, 11 at Cristobal and 11 at Balboa. Bunker coal in the amount of 27,261 tons, was supplied to 98 vessels; 24,242 tons to 76 vessels at Cristobal; and 3,019 tons to 22 vessels at Balboa. Fuel oil was supplied to but 1 vessel, 1,263 barrels at Balboa. There were 263 vessels supplied with 12,627,357 gallons of water; 164 at Cristobal with 9,912,357 gallons; and 99 at Balboa with 2.715,000 gallons. Sales of commissary supplies to commercial vessels, other than those of the Panama Railroad Steamship Line, aggregated $88,555.18, including $4,507.99 for laundry service; these sales were made to 170 vessels at Cristobal in the amount of $57,841.85; and to 98 vessels at Balboa in the amount of $30,713.33. Charges for tug service for vessels using the Canal and the terminal ports totaled $17,880.85, of which $11,701.25 was earned at Cristobal, and $6,179.60 at Balboa. Charges for pilotage totaled $10,842, $8,012 at Cristobal, and $2,830 at Balboa.

STATEMENT OF OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Canal are shown in the following tabulation:

Item.	Cristobal.	Balboa.	Total.
Commercial ships passing through the Canal	119	119	238
Net tonnage of above vessels, Panama Canal measurement	470,536	465,043	935,579
United States equivalent net tonnage of commercial vessels	381,447	380,566	762,013
Registered gross tonnage of commercial vessels	599,920	591,016	1,190,936
Registered net tonnage of commercial vessels	381,626	372,914	754,540
Cargo through the Canal in commercial vessels, tons of 2,240 pounds	488,713	502,353	991,066
Included in above ..... tons	1,783	1,360	3,143

Item.	Cristobal.	Balboa.	Total.
Nationality of commercial vessels through the Canal:			
British	47	37	84
Belgian	1	.....	1
Chilean	1	2	3
Costa Rican	1	1	2
Danish	.....	1	1
Dutch	2	2	4
French	1	3	4
German	.....	4	4
Italian	1	.....	1
Japanese	5	5	10
Norwegian	4	7	11
Panamanian	1	.....	1
Peruvian	2	3	5
Spanish	5	3	8
Swedish	1	1	2
United States	47	50	97
Total	119	119	238
Panama Canal net tonnage of commercial vessels by nationality:			
Belgian	4,049	.....	4,049
British	182,831	147,865	330,696
Chilean	2,577	5,645	8,222
Costa Rican	185	185	370
Danish	.....	3,515	3,515
Dutch	11,200	12,719	23,919
French	4,170	11,834	16,004
German	.....	12,788	12,788
Italian	4,915	.....	4,915
Japanese	24,819	19,719	44,538
Norwegian	16,056	25,589	41,645
Panamanian	14	.....	14
Peruvian	5,364	8,315	13,679
Spanish	12,886	8,737	21,623
Swedish	4,019	4,089	8,108
United States	197,451	204,043	401,494
Totals for October	470,536	465,043	935,579
Totals for preceding month	504,349	504,436	1,008,785
Totals for October, 1919	281,903	388,197	670,100
United States equivalent net tonnage of commercial vessels by nationality:			
Belgian	3,158	.....	3,158
British	146,977	123,980	270,957
Chilean	1,463	3,260	4,723
Costa Rican	172	172	344
Danish	.....	3,005	3,005
Dutch	7,130	9,113	16,243
French	3,638	10,667	14,305
German	.....	9,893	9,893
Italian	3,716	.....	3,716
Japanese	21,738	17,481	39,219
Norwegian	12,940	21,386	34,326
Panamanian	16	.....	16
Peruvian	2,504	4,010	6,514
Spanish	11,009	8,072	19,081
Swedish	2,244	2,248	4,492
United States	164,742	167,279	332,021
Totals for October	381,447	380,566	762,013
Totals for preceding month	417,500	415,242	832,742
Totals for October, 1919	229,238	316,617	545,865
Registered gross tonnage of commercial vessels by nationality:			
Belgian	5,072	.....	5,072
British	240,169	186,767	426,936
Chilean	2,553	6,367	8,920
Costa Rican	158	158	316
Danish	.....	4,465	4,465
Dutch	11,312	14,554	25,866
French	5,796	16,223	22,019
German	.....	15,961	15,961
Italian	7,870	.....	7,870
Japanese	33,072	26,045	59,117
Norwegian	20,546	33,461	54,007
Panamanian	16	.....	16
Peruvian	7,922	12,666	20,588
Spanish	16,987	11,962	28,949
Swedish	3,745	3,767	7,512
United States	244,702	258,620	503,322
Totals for October	599,920	591,016	1,190,936
Totals for preceding month	622,073	586,398	1,208,471
Totals for October, 1919	363,369	509,637	873,006

Item.	Cristobal.	Balboa.	Total.
Registered net tonnage of commercial vessels by nationality:			
Belgian	3,094	.....	3,094
British	147,378	115,687	263,065
Chilean	1,600	3,888	5,488
Costa Rican	93	93	186
Danish	.....	2,853	2,853
Dutch	7,140	9,216	16,356
French	3,689	10,737	14,426
German	.....	9,954	9,954
Italian	4,547	.....	4,547
Japanese	21,355	16,801	38,156
Norwegian	12,927	21,309	34,236
Panamanian	16	.....	16
Peruvian	3,941	6,614	10,555
Spanish	10,829	8,277	19,106
Swedish	2,858	2,865	5,723
United States	162,159	164,620	326,779
Totals for October	381,626	372,914	754,540
Totals for preceding month	404,946	412,864	817,810
Totals for October, 1919	232,696	319,129	551,825
Cargo carried by commercial vessels by nationality:			
Belgian ... tons	5,700	.....	5,700
British ... tons	184,202	144,610	328,812
Chilean ... tons	527	1,193	1,720
Costa Rican ... tons	.....	192	192
Danish ... tons	.....	6,400	6,400
Dutch ... tons	3,988	18,059	22,047
French ... tons	1,542	18,605	20,147
German ... tons	.....	16,010	16,010
Italian ... tons	1,000	.....	1,000
Japanese ... tons	30,816	33,610	64,426
Norwegian ... tons	28,591	26,000	54,591
Peruvian ... tons	4,085	9,478	13,563
Spanish ... tons	.....	15,232	15,232
Swedish ... tons	3,689	5,550	9,239
United States ... tons	224,573	207,414	431,987
Totals for October ... tons	488,713	502,353	991,066
Totals for preceding month ... tons	444,217	565,340	1,009,557
Totals for October, 1919 ... tons	268,131	437,750	705,881
Tolls levied against commercial vessels by nationality:			
Belgian	$3,947.50	.....	$3,947.50
British	181,801.21	$150,643.86	332,445.07
Chilean	1,828.75	4,075.00	5,903.75
Costa Rican	133.20	215.00	348.20
Danish	.....	3,756.25	3,756.25
Dutch	8,912.50	11,391.25	20,303.75
French	4,547.50	13,253.15	17,800.65
German	.....	12,293.25	12,293.25
Italian	4,645.00	.....	4,645.00
Japanese	27,023.55	21,663.35	48,686.90
Norwegian	16,175.00	22,963.21	39,138.21
Panamanian	12.00	.....	12.00
Peruvian	3,130.00	5,012.50	8,142.50
Spanish	9,277.92	9,875.00	19,152.92
Swedish	2,805.00	2,810.00	5,615.00
United States	199,677.40	189,957.23	389,634.63
Totals for October	$463,916.53	$447,909.05	$911,825.58
Totals for preceding month	$494,954.82	$515,195.81	1,010,150.63
Vessels passing through the Canal free of tolls:			
U. S. Navy battleship	1	.....	1
U. S. Navy cruisers	1	1	2
U. S. Navy Eagle boats	10	.....	10
U. S. Navy destroyers	2	.....	2
U. S. Navy mine sweepers	2	1	3
U. S. Navy gunboat	1	.....	1
U. S. Navy supply ship	.....	1	1
U. S. Army transports	1	1	2
Colliers with fuel for Army and Navy	4	.....	4
Totals	22	4	26
Yacht, ocean-going, passing through Canal	1	.....	1
Net tonnage of above, Panama Canal measurement	14	.....	14
Total ocean-going vessels passing through Canal	141	123	264
Launches and miscellaneous craft passing through Canal	3	4	7
Net tonnage of above, Panama Canal measurement	22	13	35

Item.	Cristobal.	Balboa.	Total.
Total vessels and craft passing through Canal	144	127	271
Cargo carried by Government vessels on which no tolls were charged	31,229	2,992	34,221
Commercial vessel through Canal without cargo but not in ballast	1	.....	1
Net tonnage of above, Panama Canal measurement	6,039	.....	6,039
Motor vessels through the Canal	3	6	9
Net tonnage of above, Panama Canal measurement	4,273	16,103	20,376
Commercial vessels through the Canal in ballast	14	19	33
Net tonnage of above, Panama Canal measurement	41,666	77,205	118,871
Tolls levied on laden vessels	$438,298.00	$392,070.65	$830,368.65
Tolls levied on vessels in ballast	25,606.53	55,838.40	81,444.93
Tolls levied on ocean-going yachts	12.00	.....	12.00
Tolls levied on launches and miscellaneous craft	19.25	9.75	29.00
Total tolls levied, all vessels	$463,916.53	$447,909.05	$911,825.58
Total vessels entering port, including ships transiting Canal	296	271	567
Total vessels clearing port, including ships transiting Canal	298	274	572
Total vessels entering and clearing	594	545	1,139
Registered gross tonnage of vessels entering port	1,510,104	1,274,521	2,784,625
Registered gross tonnage of vessels clearing port	1,512,586	1,279,769	2,792,355
Totals, vessels entering and clearing	3,022,690	2,554,290	5,576,980
Registered net tonnage of vessels entering port	969,576	819,976	1,789,552
Registered net tonnage of vessels clearing port	972,060	823,798	1,795,858
Totals for vessels entering and clearing	1,941,636	1,643,774	3,585,410
Vessels entering port but not passing through Canal	52	3	55
Gross tonnage of above	251,311	11,249	262,560
Net tonnage of above	168,143	7,881	176,024
Vessels clearing port but not passing through Canal	59	5	64
Gross tonnage of above	254,487	12,916	267,403
Net tonnage of above	168,540	9,499	178,039
Vessels passing through the Canal and handling passengers or cargo at port:			
Entering	50	48	98
Gross tonnage of above	236,657	166,550	403,207
Net tonnage of above	142,433	96,379	238,812
Vessels passing through the Canal and handling passengers or cargo at port:			
Clearing	46	49	95
Gross tonnage of above	220,663	177,631	398,294
Net tonnage of above	134,270	102,349	236,619
Transit cargo arriving ....tons..	962,630	1,024,931	1,987,561
Transit cargo clearing ....tons..	971,321	1,034,825	2,006,146
Total transit cargo ....tons..	1,933,951	2,059,756	3,993,707
Cargo received for transshipment ....tons..	32,055	63	32,118
Cargo transshipped ....tons..	31,053	22	31,075
Local cargo arriving ....tons..	35,045	13,550	48,595
Local cargo shipped ....tons..	1,302	384	1,686
Total local cargo ....tons..	36,347	13,934	50,281
Cargo received by Receiving and Forwarding Agency, P. R. R. ....tons..	55,226	1,405	56,631
Cargo dispatched by Receiving and Forwarding Agency, P. R. R. ....tons..	36,883	4,873	41,756
Cargo rehandled by Receiving and Forwarding Agency, P. R. R. ....tons..	6,917	9	6,926
Cargo stevedored, included in above ....tons..	44,534	655	45,189
Commercial vessels, other than Panama Railroad supplied with bunker coal	76	22	98
Coal supplied above vessels ....tons..	24,242	3,019	27,261
Panama Railroad vessels supplied with bunker coal	7	1	8
Coal supplied above vessels ....tons..	1,397	1	1,398
U. S. Army vessels supplied with bunker coal	7	.....	7
Coal supplied above vessels ....tons..	506	.....	506
Total vessels supplied with bunker coal	90	23	113
Total coal furnished above vessels ....tons..	26,145	3,020	29,165
Coal supplied Panama Railroad departments ....tons..	974	.....	974
Coal supplied to U. S. Army, excepting vessels ....tons..	245	17	262
Coal supplied The Panama Canal ....tons..	1,416	254	1,670
Coal supplied individuals and companies ....tons..	398	.....	398
Total coal furnished from Panama Canal deposits ....tons..	29,178	3,291	32,469
Coal received during October ....tons..	31,513	.....	31,513
Coal on hand, November 1, 1920 ....tons..	14,903	8,739	23,642
Coal on hand, October 1, 1920 ....tons..	12,568	12,030	24,598
Coal, U. S. Navy Account.			
Coal furnished U. S. Navy, including vessels ....tons..	1,655	2,187	3,842
Coal on hand, November 1, 1920 ....tons..	58,533	15,741	74,274
Coal on hand, October 1, 1920 ....tons..	60,188	17,928	78,116
Commercial vessel other than Panama Railroad supplied with fuel oil from Panama Canal tanks	.....	1	1
Fuel oil sold to above vessel ....bbls..	.....	1,263	1,263

Item.	Cristobal.	Balboa.	Total.
Fuel oil furnished Panama Railroad vessels.....bbls..	4,216	.....	4,216
Fuel oil issued to U. S. Navy.....bbls...	746	.....	746
Fuel oil issued to U. S. Army.....bbls..	4,591	73	4,664
Fuel oil issued to Panama Canal departments.....bbls..	7,264	26,741	34,005
Fuel oil issued to individuals and companies.....bbls..	3,265	4,580	7,845
Total fuel oil furnished from Panama Canal tanks.....bbls..	20,082	32,657	52,739
Fuel oil received during October.....bbls..	.....	60,236	60,236
Fuel oil on hand, November 1, 1920.....bbls..	103,190	116,545	219,735
Fuel oil on hand, October 1, 1920.....bbls..	123,272	88,966	212,238
Other oil pumped for individuals and companies.....bbls..	261,621	42,482	304,103
Diesel oil on hand, October 1, 1920.....bbls..	.....	1,110	1,110
Diesel oil received during October.....bbls..	53,920	.....	53,920
Diesel oil issued during month.....bbls..	344	27	371
Diesel oil on hand, November 1 1920.....bbls..	53,576	1,083	54,659
Vessels supplied with water.....	164	99	263
Water sold to above vessels.....gallons..	9,912,357	2,715,000	12,627,357
Commercial vessels furnished commissary supplies.....	170	98	268
Panama Railroad vessels furnished commissary supplies.....	11	1	12
Other U. S. Government vessels furnished commissary supplies.....	32	19	51
Commissary sales to commercial vessels:			
Ice.....	$2,655.75	$567.50	$3,223.25
Wholesale groceries.....	9,146.84	5,625.36	14,772.20
Wholesale cold storage.....	38,395.82	21,665.09	60,060.91
Laundry.....	4,173.73	334.26	4,507 99
Miscellaneous.....	3,469.71	2,521.12	5,990.83
Total.....	$57,841.85	$30,713.33	$88,555.18
Commissary sales to Panama Railroad vessels:			
Ice.....	$109.60	$9.60	$119.20
Wholesale groceries.....	2,404.53	16.50	2,421.03
Wholesale cold storage.....	10,212.42	509.22	10,721.64
Laundry.....	2,339.94	.....	2,339.94
Miscellaneous.....	1,158.28	.....	1,158.28
Totals.....	$16,224.77	$535.32	$16,760.09
Commissary sales to other Government vessels:			
Ice.....	$426.42	$313.24	$739.66
Wholesale groceries.....	17,363.69	5,580.09	22,943.78
Wholesale cold storage.....	34,988.54	6,533.68	41,522.22
Laundry.....	2,270.32	.....	2,270.32
Miscellaneous.....	3,109.99	659.03	3,769.02
Totals.....	$58,158.96	$13,086.04	$71,245.00
Total commissary sales to all vessels for October.....	$132,225.58	$44.334.69	$176,560.27
Total commissary sales to all vessels for preceding month.....	85,557.52	72,508.62	158,066.14
Total commissary sales to all vessels for month of October, 1919..	85,525.24	53,883.77	139,409.01
Movement of passengers.			
Disembarking at Canal ports:			
First class—			
From Atlantic ports.....	1,594	2	1,596
From Pacific ports.....	219	122	341
Total, first class.....	1,813	124	1,937
Other than first class:			
From Atlantic ports.....	1,676	5	1,681
From Pacific ports.....	87	59	146
Total, other than first class.....	1,763	64	1,827
Total, disembarking at Canal ports.....	3,576	188	3,764
Embarking at Canal ports:			
First class—			
For Atlantic ports.....	1,188	4	1,192
For Pacific ports.....	232	150	382
Total, first class.....	1,420	154	1,574
Other than first class—			
For Atlantic ports.....	1,177	.....	1,177
For Pacific ports.....	56	64	120
Total, other than first class.....	1,233	64	1,297
Total, embarking at Canal ports.....	2,653	218	2,871

Item.	Cristobal.	Balboa.	Total.
Remaining on board vessels:			
First class—			
Bound from Atlantic to Pacific ports	758	910	1,668
Bound from Pacific to Atlantic ports	366	759	1,125
Bound from Atlantic to Atlantic ports	295	.....	295
Total, first class	1,419	1,669	3,088
Other than first class—			
Bound from Atlantic to Pacific ports	1,518	1,542	3,060
Bound from Pacific to Atlantic ports	1,422	1,364	2,786
Bound from Atlantic to Atlantic ports	83	.....	83
Total, other than first class	3,023	2,906	5,929
Total remaining on board	4,442	4,575	9,017
Total passengers arriving	8,018	4,763	12,781
Total passengers departing	7,095	4,793	11,888
Arrivals in excess of departures	923	.....	.....
Departures in excess of arrivals	.....	30	.....
Net excess of arrivals	.....	.....	893
Services to American seamen:			
Seamen shipped	294	89	383
Seamen paid off	272	114	386
Seamen deserted	31	1	32
Seamen lodged and subsisted	49	9	58
Seamen repatriated	28	7	35
Wages of American seamen:			
Total amount earned	$25,502.54	$17,951.29	$43,453.83
Deductions approved by Deputy Shipping Commissioner	11,728.51	6,796.80	18,525.31
Balance due seamen	$13,774.03	$11,154.49	$24,928.52
Paid to seamen	$9,151.59	$7,195.35	$16,346.94
Received on deposit for seamen	$4,622.44	$3,959.14	$8,581.58
Immigration deposits received	.....	$800.00	$800.00
Services to American vessels:			
Crew shipped	1	.....	1
Crews paid off	2	.....	2
Shipping article written	1	.....	1
Marine notes of protest noted	8	6	14
Bills of health issued	160	147	307
Clearances issued	161	131	292

LOCK OPERATION.

Lockages of commercial vessels for October were as follows:

	Number of lockages.			Number of vessels.		
	North.	South.	Total.	North.	South.	Total.
Gatun	115	114	229	120	125	245
Pedro Miguel	114	117	231	121	124	245
Miraflores	114	119	233	122	125	247
Totals	343	350	693	363	374	737

All lockages, including Army and Navy vessels, those of the Panama Railroad and The Panama Canal, are shown in the following statement of lockages for October:

Lockages.	Gatun.	Pedro Miguel.	Miraflores.
Commercial	229	231	233
Noncommercial, Army and Navy	15	20	20
Noncommercial, Canal equipment	2	12	13
Totals	246	263	266
Vessels.			
Commercial	245	245	247
Noncommercial, Army and Navy	36	38	42
Noncommercial, Canal equipment	15	22	21
Totals	296	305	310

The total consumption of water for lockages during October was 2,894,480,000 cubic feet. The consumption by locks was as follows:

	Gatun.	Pedro Miguel.	Miraflores.
	Cubic feet.	*Cubic feet.*	*Cubic feet.*
Lockages	1,069,600,000	835,000,000	813,970,000
Leakage	30,000,000	78,550,000	59,000,000
Maintenance	.....	.....	8,360,000
Totals	1,099,600,000	913,550,000	861,330,000

METEOROLOGY.

The rainfall for the month was generally below normal over the Pacific section and at Brazos Brook, and above normal throughout the remainder of the Canal Zone and vicinity. The maximum excess of rainfall occurred over the Chagres and Trinidad valleys, the October rainfall at stations located in these watersheds being the highest on record for the month. Totals ranged from 6.48 inches at Balboa Heights, to 29.61 inches at the Chilibrillo Station (Cape Mala rainfall not included). The greatest amount of rainfall recorded in 24 hours was 5 inches at Gamboa on October 21 and 22.

The estimated October rainfall over the Gatun Lake watershed was 22.86 inches, compared with a 10-year mean of 16.17 inches; over the Chagres River watershed above Alhajuela it was 26.07 inches, compared with a 19-year mean of 15.18 inches.

The discharge of the Chagres River at Alhajuela was 4,834 c. f. s., being 40 per cent above the 19-year October average of 3,462 c. f. s., and furnished 30 per cent of the Gatun Lake total yield. The maximum momentary discharge for the month was 16,350 c. f. s. at elevation 99.10 feet on the 20th, and the minimum discharge was 2,350 c. f. s. on the 1st. While there were but 4 rises of 5 feet or over at Alhajuela during the month, the flow was so consistent and so well distributed that it has been exceeded but once during October in 19 years of record, the maximum occurring in 1914 with 5,135 c. f. s.

The Gatun Lake watershed total yield was 16,291 c. f. s., the highest of October record since Canal operation, being 34 per cent above the 10-year October mean of 12,138 c. f. s. The minimum total yield for October was 7,868 c. f. s. in 1911. The net yield for the month was also the highest of October record, being 15,744 c. f. s. The minimum net yield for October was 7,798 c. f. s. in 1911. The lake varied from a maximum elevation of 86.69 feet on the 20th, to a minimum elevation of 86 feet on the 1st, averaged 86.30 feet, and ended at elevation 86.54 feet, midnight the 31st. The draft of the lake for lockages and power was 2,305 c. f. s., compared with 2,473 c. f. s., for last month, and 2,101 c. f. s. for October, 1919. The ratio of water used for power and lockages was 2.24 to 1. The Gatun spillway was operated daily during the month with the exception of the 1st.

Miraflores Lake varied from a maximum elevation of 54.80 feet on the 21st, to a minimum elevation of 52.90 feet on the 16th, averaged 53.95 feet, and ended at elevation 53.88 feet, midnight the 31st.

Temperatures recorded during the month show a minimum of 68° F. at Alhajuela, to a maximum of 91° F. at Gatun.

Three slight seismic tremors from distant disturbances were recorded on the 7th, 22d, and 28th of the month, respectively. The disturbance of the 7th probably had its origin in Mexico, while that of the 28th occurred in the northern part of Chile; the origin of the tremors of the 22d are unknown.

ELECTRICAL DIVISION.

The combined gross output of the Gatun hydroelectric station for October was 6,039,100 KWH on a computed water consumption of 4,268,130,000 cubic feet. The combined gross output of the Miraflores steam plant was 233,640 KWH with an oil consumption of 3,360 barrels. This plant was operated for stand-by purposes only.

The total gross output of both stations was 6,272,740 KWH. The total power distributed to consumers was 5,331,293 KWH. The total loss of power in plant auxiliaries, transmission, and transformation was 941,447 KWH, or 15 per cent of gross output.

There were 5 interruptions to transmission line service during the month. All insulators on the transmission line are being tested and replaced whenever found defective.

There were a total of 69 spillway gate operations during the month. The regular operation and maintenance was carried on at all substations without any extraordinary occurrences. Miscellaneous repairs and installations of electric equipment were made on 68 vessels, 36 at Cristobal, and 32 at Balboa.

Status of construction work.

	Per cent completed
Installation of 4 K-5 switches at Miraflores substation	68
Installation of two 1,000 ampere, K-12 switches at Cristobal substation	[1] 80
Installation of new 8,400 KVA transformer and 3 new tie-line equipments at Gatun substation	26
Installation of 2 complete feeder equipments at Balboa substation	[1] 95
Installation of three 400,000 c/m, 3-conductor, lead-covered cables as tie-lines between Gatun hydroelectric and substation	57

[1] Indicates no work done during the month.

Construction work for the Army and Navy is separately reported.

SHOP, FOUNDRY, AND DRY DOCK WORK.

The work on rebuilding the steamship *Marne* proceeded without interruption, all dry dock work being completed and the vessel undocked on October 23. While the vessel was in dry dock all shell plating was put into place, the stock installed and the fore and main masts set up. The main propelling turbine and reduction gear has been installed. The structural work is well in hand, but difficulty is being experienced on account of late deliveries of different equipment.

The work on the tug *Bohio*, which is being converted from a coal-burner into an oil-burner, together with general repairs, progressed satisfactorily during the month. All dry dock work on the steamship *Hodges* was completed and the vessel undocked on the 23d.

In addition to the above, miscellaneous repairs were made on the following vessels during the month: Steamships *Marne*, *Maricopa*, *Koyo Maru*, *Achilles*, *Parthia*, *Hayden*, *Westboro*, *Nokatay*, *Eastern Cloud*, *S. C. Harkness*, *Donald McKay*, *Diablo*, *Caddo*, *Benjamin Brewster*, *Western Cross*, *Lady Sybil*, *Cordelia*, *Springfield*, *Calcutta*, *Havilah*, tug *Perico*, U. S. S. *Dolphin*, U. S. S. *Des Moines*, U S. S. *Cleveland*, U. S. S. *Kansas*, U. S. S. *Poe*, Eagle boat *No. 12*, U. S. submarines *R–21*, *R–27*, and U. S. subchaser *V–12*.

Of the above the following were in dry dock at Balboa during the month; Submarines *R–21*, *R–27*, steamships *Marne*, *General H. F. Hodges*, *Benjamin Brewster*, *Lady Sybil*, tugs *Cocoli*, *Bohio*, barges *No. 66* and *No. 131*, and U. S. S. *Des Moines*.

The more important repair work at the Cristobal plant included the following: Retubed main condenser, renewed boiler tubes, welded boiler, repaired L. P. eccentric, propeller blade, and davits of steamship *Manavi*. Repairs to main engine, ice machine, generator engine, pumps, and donkey boiler of the steamship *Astmacho III*. Repairing of rudder, stern bushing, and auxiliaries of the U. S. S. *Poe*. Repairs to pumps, boiler, and engine of the tug *Engineer*. On the steamship *Mantaro*, 250 boiler tubes, 43 staybolts, and 3 staytubes were renewed, and the boiler eccentric welded. On the U. S. A. T. *Heffron* repairs were made to the fuel oil pump, I . P. slipper, settling tanks, after peak tanks, piping on heater, manifold and oil service line; boilers were scaled and boom made. On the steamship *Chile*, the port and starboard boilers, dynamos, and winch were repaired.

In addition to the above miscellaneous repair work was done on the following vessels. Steamships *Ucayali*, *Van Rensaellaer*, *West Boro*, *Lake Fansdale*, *Lake Granby*, D. A. D. G. *70*, *Yosemite*, *Jamaica*, *Lake Hector*, *Point Bonita*, *Balboa*, *Brookline*, *Europa*, *Haynie*, *Adria*, *Acajutla*, *Pacific*, *Heredia*, *Peru*, *Daybreak*, *St. Joseph*, *Delph*, *Asuncion*, *Metapan*, *Alkmaar*, *Springfield*, *Vinton County*, *Achilles*, *Cuba*, *Cristobal*, *General Gorgas*, *Urubamba*, *Topatopa*, *Caribbean*, *Allianca*, *Colon*, *Panama*, *Ulysses*, *Advance*, motor ships *Laura C. Hall*, *Nobel*, schooner *Arabia*, tugs *St. Teath*, *St. Anne*, *St. Athan*, *Tavernilla*, *Engineer*, *and Porto Bello*, U. S. S. *Cleveland*, *Fields*, Eagle boats *No. 47*, *No. 6*, *No. 7*, *No. 12*, *No. 34*, and *No. 38*, Army transports *Thomas*, *Heffron*, *Cantigny*, U. S. M. P. *Graham*, dredge *Gamboa*, barges *Mamei* and *No. 130*, and U. S. S. C. *No. 285*.

The following vessels were dry-docked at Cristobal during the month: U. S. N. oil barge *No. 11*, U. S. S. *Poe*, barge *No. 150*, barge *No. 151*, steamship *Manavi*, tug *Supply No. 1*, tug *Relief*, barge *No. 15*, barge *No. 19*, S. P. *No. 2232*, barge *No. 119*.

The output of the Mechanical Division in patterns, castings, and other foundry production for October, as compared with the preceding month, is shown below:

	October.			September.		
	Patterns.	Castings.	Pounds.	Patterns.	Castings.	Pounds.
Iron	45	2,848	104,038	23	1,029	49,724
Steel	17	1,506	135,813	31	94	13,915
Brass	25	1,179	13,766	22	1,800	15,201

The ordinary repair and maintenance work of the Mechanical Division for the month of October included among other items the following:

Cars repaired	1,809
Locomotives and cranes repaired	770
Passenger coaches packed, cleaned, oiled, and inspected	3,872
Freight cars repacked	363
Locomotives hostled	1,326
Cranes hostled	252
Locomotives ridden	78
Locomotives inspected	115
Crews instructed in handling locomotives	31
Crews instructed in oil and fuel economy	42
Crews instructed in air brakes	11
Cranes, locomotive, inspected	31
Steamshovels inspected	3

BUILDING CONSTRUCTION.

The following statement represents the degree of completion, October 31, of the more important construction work by the Building Division:

	Per cent completed.
Colon stables:	
East half	100
West half	100
Silver townsite, Mount Hope:	
Commissary	98
Twenty-one 12-family married quarters	100
Fourteen 12-family married quarters	99
Four 12-family married quarters	95
Two 32-room bachelor quarters	99
Two 32-room bachelor quarters	90
Two 32-room bachelor quarters	70
Two 32-room bachelor quarters	60
Two 32-room bachelor quarters	50
Cristobal incinerator	(3)
Combination shop and warehouse, Cristobal	95
Royal Mail Steam Packet Company's Office, Cristobal	56
Applying specification roof to Pier No. 6, Cristobal	[2]75
Lighthouse, end of East Breakwater, Cristobal	100
National Catholic War Council Building, Balboa	80
Bake shop, workroom, and storage room, Ancon Hospital	95
Moving four 4-family quarters from Las Cascadas to Quarry Heights	100
Moving old Ancon School building to Balboa	100
Repairs to Dredging Division store, Paraiso	100
Concreting floor, Paraiso Store	100
Moving buildings Nos. 84 and 268 from Empire	100
Construction of additional room, Ancon Hospital Laboratory	90
Painting silver quarters, Gatun	5
Installation of refrigerator, Corozal Dairy	95
Alteration of old fire station, Ancon	90
Reroofing Cristobal bakery	20
Installation of oil-burning system, Hotel Washington	50
Repairs to 35 houses, Cristobal	10

[2] Completed except for overhead cranes. [3] No work done during the month.

Construction work for the Army is separately reported.

DREDGING DIVISION.

The dredging operations at Cucaracha slide the past few months have improved conditions, both in the channel and basin in front of this slide, to such an extent that the channel shows at this date an average depth of 45 feet and the basin shows a depth of 30 feet or more. The dredge *Cascadas* worked within the basin only 2 days, and suction dredge *No. 86*, finished cleaning up the channel in front of this slide between the 1st and 14th of the month. The movement of material into the basin and channel has abated. The general movement stopped for a few days during the early part of the month, but during the latter part all of the easterly portion of the slide area showed a southwesterly movement. There was no interference with Canal traffic.

Including the excavation for October, the dredges have removed a total of 2,068,000 cubic yards of earth and rock from this area since the slide of February 22, 1920.

Both Culebra and Barge Repair slides have shown some surface movement during the month. Grader No. 1 was engaged from the 1st to 6th, inclusive, at Barge Repair Slide, and the remainder of the month at East Culebra Slide, grading and ditching at both slides. It is estimated that a total of 45,000 cubic yards of material were moved at these slides. At Cucaracha Slide Grader No. 3 worked the entire month, sluicing and grading, and moved an estimated total of 75,000 cubic yards of earth and rock.

The total excavation for October, including earth, rock, run-of-bank gravel, and sand, was 432,055 cubic yards, as follows:

Cubic yards.	Classified as— Earth.	Rock.	Character of work.	Stations.	Equipment
				Cucaracha Slide.	
(1) 10,900	.....	10,900	Maintenance.....	1805–00 to 1814–00 E.....	*Cascades.*
(1) 27,300	25,000	2,300	Maintenance.....	1811–00 to 1804–00 E and W.....	*No. 86.*
				Gaillard Cut, West Culebra.	
(1) 91,400	4,600	86,800	Maintenance.....	1791–50 to 1769–00 W.....	*Cascades.*
				Gaillard Cut, Culebra Slide.	
(1) 60,400	52,700	7,700	Maintenance.....	1804–00 to 1794–00 E and W.....	*No. 86.*
				Pacific Entrance.	
(2)101,000	101,000	.....	Maintenance.....	2213–00 to 2234–00 CL and W.....	*No. 84.*
(2) 2,000	.....	2,000	Construction.....	2213–00 to 2234–00 CL and W.....	*No. 84.*
				P. R. R. P–20.	
(3) 42,000	34,000	8,000	Aux. construction..	Area No. 10, Cristobal.....	*Gamboa.*
(3) 16,100	4,100	12,000	Aux. construction..	Area No. 11, Cristobal.....	*Gamboa*
				O. M. M. 1705.	
(3) 11,900	11,300	600	Aux. construction..	Area No. 3, Cristobal.....	*Gamboa.*
(3) 2,100	.....	2,100	Construction.....	Area No. 3, Cristobal.....	*Gamboa.*
(3) 11,000	8,800	2,200	Aux. construction..	Area No. 4, Cristobal.....	*Gamboa.*
(3) 16,200	8,000	8,200	Aux. construction..	Area No. 12, Cristobal.....	*Gamboa.*
(4) (5)7,155	(5)7,155	.....	Aux. construction..	Chagres River gravel beds.....	*Marmot.*
(4) (5)32,600	(5)32,600	.....	Aux. construction..	Chagres River gravel beds.....	*Marmot.*
432,055	289,255	142,800			

(1) Gaillard Cut. (2) Pacific entrance. (3) Atlantic terminals. (4) Chagres River. (5) Sand and gravel.

The excavated material was dumped as follows:

	Cubic yards.
North of Gamboa	102,300
Rio Grande Valley	87,700
San Juan fill	103,000
Between east end East Breakwater and Margarita Point	99,300
Chagres River, deep water	32,600
Gamboa gravel plant	7,155
Total	432,055

The following excavation remained to be done on November 1, 1920:

Location.	Earth.	Rock.	Total.
	Cu. yds.	*Cu. yds.*	*Cu. yds.*
Gaillard Cut	.....	25,000	25,000
Pacific entrance	47,500	80,900	128,400
Total, Canal Prism	47,500	105,900	153,400
Balboa inner harbor	92,850	13,400	106,250
Total, ocean to ocean	140,350	119,300	259,650

MUNICIPAL ENGINEERING DIVISION.

The total output of all pumping stations for October was 818,193,700 gallons; and that of the 3 filtration plants, 515,581,000 gallons. The consumption of water in Panama City was 83,808,000 gallons, and that for Colon 66,037,000 gallons. Sales of water to 263 vessels at Balboa and Cristobal totaled 12,627,357 gallons. There were 1,524 tons of garbage disposed of at the Mount Hope incinerator and 2,755 tons at the Gavilan Island incinerator plant.

Construction work, as itemized below, was under progress during October, with completion on November 1, as shown:

Northern District.

	Per cent. completed.
Municipal work, New Cristobal townsite:.	
Grading	(1)45
Roads	(2)97.5
Water lines	(2)72
Sidewalks	86
Sanitary sewers	75
Municipal work, new silver townsite:	
Grading	(2)90
Streets and roads	(2)99
Water lines	(2)99
Sewers, sanitary	97.5
Sewers, storm	(2)98
Municipal work, Block 53, Colon:	
Roads	99
Tracks	(2)99
Water lines	(2)95
Sanitary sewers	(2)98
Storm drains	95

(1) Percentage previously given in error. (2) No work done during the month.

Northern District—Continued.

	Per cent completed.
Roads for west half, Colon stables	[1]99
Installation of water and sewer system, new Panama Railroad station at Gatun	[1]99
Construction of sidewalks on Lighthouse and Telephone Row, Gatun	[1]30
Mixing and placing concrete for tank foundation for Grebien and Martinz	100
Moving water and sewer lines, All-America Cables Co's. lot, Cristobal	50

Southern District.

Municipal work for 4 type-14 houses, Quarry Heights	75
Municipal work, National Catholic War Council building	75
Storm sewer, Javillo Fill	[1]99
Sewer, Northern Avenue to Beach	[1]99.1
Box sewer, Panama Railroad yards	99
Concreting streets, new Santo Tomas Hospital	94
Municipal work for 3 type-16 houses, Balboa	[1]60
Reconstruction of road, Quarry Heights	[1]95
Water and sewer connections to Shrine building, Balboa Heights	60
Box sewer on 13th Street	99
Construction of road to Paraiso Store	80
Sidewalk, Balboa School annex	90
New wash water tank, Miraflores	11

[1] No work done during the month.

Municipal work for the Army is separately reported.

WORKING FORCE.

(*Effective October 20, 1920.*)

Department or Division.	Gold.	Silver.	Total.
Operation and Maintenance:			
Office	31	38	69
Building Division	201	523	724
Electrical Division	225	249	474
Municipal Engineering	98	1,024	1,122
Lock Operation	144	571	715
Dredging Division	191	1,146	1,337
Mechanical Division	1,042	1,965	3,007
Marine Division	162	548	710
Fortifications	70	493	563
Total	2,164	6,557	8,721
Supply Department:			
Quartermaster	225	1,692	1,917
Subsistence	35	375	410
Commissary	301	1,454	1,755
Cattle Industry, Plantations	22	388	410
Hotel Washington	8	93	101
Totals	591	4,002	4,593
Accounting	253	9	262
Health	242	831	1,073
Executive	569	257	826
Panama Railroad:			
Superintendent	90	486	576
Transportation	117	164	281
Receiving and Forwarding Agency	74	1,770	1,844
Coaling Stations	117	746	863
Totals	1,462	4,263	5,725
Grand total	4,217	14,822	19,039

OCCUPATION OF QUARTERS.

Occupants of Panama Canal and Panama Railroad quarters on October 31 were classified as follows:

	Men.	Women.	Children.	Total.
Americans	3,608	2,063	2,569	8,240
Europeans	125	28	56	209
West Indians	4,739	2,051	4,106	10,896
Totals, October 31	8,472	4,142	6,731	19,345

VITAL STATISTICS.

One hundred and fifty-eight deaths occurred during October from the population comprising the Canal Zone and the cities of Panama and Colon. Of the above deaths 63, or 40 per cent, occurred among children under 5 years of age.

Tuberculosis, colitis and enteritis, and pneumonia, with 25, 21, and 14 deaths, respectively, were the leading causes of mortality in the order named. One hundred and thirteen cases of malaria were reported during the month, with 4 deaths. Dysentery caused 2 deaths, pellagra 1, and leprosy 2. There were 6 deaths due to external causes.

Three hundred and fifty births were reported during the month, 21 of which were stillbirths. Deaths under 1 year of age numbered 55, giving an infant mortality rate, based on the number of births reported for the month, of 167.2.

No quarantinable diseases originated on the Isthmus or arrived at Canal Zone ports during the month.

RECEIPTS AND SALES OF MATERIALS AND SUPPLIES.

The total value of the material ordered on United States requisitions and received on the Isthmus during October was $731,640.73. Of this material, $715,261.01 was chargeable to Operation and Maintenance, $4,615.78 to Construction and Equipment, and $11,763.94 to miscellaneous departments.

The total cash sales on the Isthmus from storehouses and obsolete stores for the month amounted to $123,185.04, of which $40,001.16 was for stock, $72,785.25 for fuel oil, $787.01 for scrap, and $9,611.62 for obsolete and second-hand material.

Sales to steamships from storehouses amounted to $63,415.30, of which $19,598.52 was for miscellaneous stock items, and $43,816.80 for fuel oil. Total sales of commissary supplies to all purchasers for October amounted to $1,022,974.82, made up as follows: To steamships other than United States Government vessels and those of the Panama Railroad Steamship Line, $89,375.76, to The Panama Canal, $131,511.80; to the United States Government, including the Army and Navy, $156,546.50; to individuals and companies, mainly through charge accounts at the retail commissaries, $24,899.84, to the Panama Railroad, including its steamships and the Hotel Washington, $32,900.31, and to individuals purchasing coupons, $587,740.61.

FINANCIAL RECEIPTS AND EXPENDITURES.

The cash balance in Canal appropriations on October 31, exclusive of fortifications, was $17,074,495.72. The balance in fortification funds allotted to The Panama Canal for expenditure was $1,060,797.43. Payments from appropriations made by the Disbursing Clerk, Washington, amounted to $1,049,153.12, and by the Paymaster on the Isthmus to $1,585,862.78. Purchases of commissary books from the Panama Railroad Company amounted to $359,483.17.

The total Canal collections on the Isthmus amounted to $2,659,211.85, and were classified as follows:

Repaid to appropriations	$1,331,548.90
Commissary and other trust funds	361,750.03
Tolls	911,854.58
Water rentals, Panama and Colon	39,401.05
Sale of construction material and equipment	555.38
Postal receipts	10,724.57
Licenses, taxes, court fines, etc	3,377.34
Total	$2,659,211.85

Collections by the Disbursing Clerk, Washington, amounted to $434,700.70. Deposits of $59,681.25 were made with the Assistant Treasurer of the United States to be applied on payment of tolls and other charges against vessels using the Canal. Receipts from Canal Zone and miscellaneous funds amounted to $204,147.03; disbursements from the same source were $202,563.71.

October payrolls on the Isthmus aggregated $1,352,398.17, as compared with $1,358,477.64 for September, a decrease of $6,079.47.

Respectfully,

JAY J. MORROW,
Acting Governor.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended December 3:

Steamship *Lake Ennis*, miscellaneous repairs; barge *No. 131*, general repairs; steamship *Marne*, general repairs and rebuilding; dredge *No. 83*, general repairs; launch *Captain Wilhelm*, hull repairs and installation of new engine; steamship *General H. F. Hodges*, general repairs; tug *Bohio*, general repairs and rebuilding; launch *Limon*, general overhauling; steamships *Olockson*, pumping out and trimming ship; *Richconcal*, repairs to boilers and miscellaneous small repairs; *Guardian*,

docking, staging, and cleaning, painting bottom and miscellaneous hull repairs; tug *Empire*, repairs to hull; barge *D. F. Hanlon*, docking, staging and cleaning, painting bottom and cross-connecting oil tanks; launch *Pilot*, repairs to hull; barge *Griffson*, miscellaneous repairs to pumps and pipe work; launch *Santa Rita*, rebuilding; steamship *Pasadena*, repairs to main turbines, condenser, feed pumps, and boilers; launch *No. 26*, miscellaneous small repairs; U. S. S. *Tattnall*, miscellaneous small repairs; Admiral's barge, repairs to propeller shaft and circulating pump; barge *Nos. 135* and *134*, general overhauling; steamships *Eldorado*, miscellaneous repairs; *Lavada*, repairs to main turbine, lubricating system, air pump, and circulators.

The following vessels were at the Cristobal shops for repairs during the week ended December 6:

Steamships *General G. W. Goethals*, *General W. C. Gorgas*, *Achilles*, and barge *Darien*, miscellaneous repairs and painting to engine, deck, and steward departments; tug *Porto Bello*, overhaul feed pump, repair boiler, towing engine, etc.; U. S. A. T. *St. Mihiel*, rebabbitt and bore out 2 generator bearings; U. S. S. *Neches*, repair circulating pump, ice machine, etc.; U. S. S. *Sciota*, renew shaft support for anchor engine, test shaft for true, etc.; steamships *Jason*, repair steering engine, indicator gear, etc.; *Eastern Glen*, manufacture, fit, and install H. P. piston rings; *Mantaro*, electric weld starboard boiler; U. S. S. Eagle *No. 4*, clean and paint, repair hull and wrap shaft; tug *Tavernilla*, repair steering engine and towing cable; U. S. S. Eagle *No. 32*, install ballast; U. S. S. C. *No. 285*, overhaul main and auxiliary engines; S. P. *No. 2232*, general overhaul and alterations; U. S. S. *Conestoga*, repair main circulating engine, etc.; steamships *Ulua*, *Argonne*, U. S. S. *Nereus*, steamships *Caribbean*, *Cartago*, *Salvador*, *Heredia*, and *General Hodges*, minor repairs.

Pier No. 1, Hoboken, Leased to Panama Railroad Steamship Line.

The President, by Executive Order No. 3332, dated October 2, 1920, confirmed the lease of Pier No. 1, Hoboken, N. J., by the War Department to the Panama Railroad Steamship Line for a period of 5 years. This pier was formerly the property of the Hamburg-American Line. Piers 4, 5, 6, and 11, adjoining Pier 1 to the north, and composing the balance of the piers formerly belonging to the Hamburg-American Line and the North German Lloyd, were by the same order placed in the possession and control of the War Department for use in connection with overseas transport service.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending December 4, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Pastores	United Fruit Co.	November 28.	November 28.	44	½
Caribbean	Panama Railroad Cattle Industry.		November 28.		1
Tyne	Pacific Steam Navigation Co.		November 29.		3,160
Mexico	Pacific Steam Navigation Co.	November 28.	November 29.	83	(4)
Antonio Lopez	Spanish Line		November 30.		154
Point Bonita	Pacific Mail Steamship Line		November 30.		545
Europa	Italian Line	November 28.	November 30.	(2)	31
Perene	Peruvian Line		December 1.		2,223
Jamaica	Pacific Steam Navigation Co.		December 1.		512
Manavi	Pacific Steam Navigation Co.		December 2.		225½
San Juan	Pacific Mail Steamship Line		December 2.		1,688
Achilles	Panama Railroad Steamship Line.	November 28	December 2.	12,027	(4)
[1]Darien	Panama Railroad Steamship Line.	November 28	December 2.	7,415½	(4)
Acajutla	Pacific Steam Navigation Co.	November 29	December 2.	(2)	614
Palena	Chilean Line	November 29	December 3.	806	192
Ulua	United Fruit Co.	November 30	December 1.	820	65
Cartago	United Fruit Co.	November 30.	December 2.	983	160
Gen. G. W. Goethals	Panama Railroad Steamship Line.	December 1.	December 3.	120	2,055
Cauca	Pacific Steam Navigation Co.	December 2.		283½	
Caribbean	Panama Railroad Cattle Industry.	December 2.		300	
Mantaro	Peruvian Line	December 3.		1,153	
Jason	Royal Netherlands W. I. Mail	December 3.		365	
Ebro	Pacific Steam Navigation Co.	December 3.	December 4.	240	186
Laura C. Hall	Pacific Metals Corporation	December 3.	December 4.	(3)	25
Guatemala	Pacific Steam Navigation Co.		December 4.		1,764
Salvador	Pacific Steam Navigation Co.	December 4.		494	
Gen. W. C. Gorgas	Panama Railroad Steamship Line.	December 4.		4,388	
Pulaski	Caribbean Steamship Co.	December 4.		114	
Chinampa	Standard Oil Co.	December 4.		8,000	

[1] Barge. [2] No cargo discharged. [3] 34 pounds. [4] No cargo laded.

Distribution of cargo passing through the Canal from the Pacific to Atlantic, October, 1920.[1]

From—	North America.								Europe.													
	United States.																					
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States	Atlantic terminus, Panama Canal.	Mexico.	West Indies.	Total, North America.	British Isles.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Total, Europe.	Egypt.	Azores.	Grand totals.	Per cent of total cargo.
South America:																					
Chile	12,097	53,752	15,960	81,809	6,942	.....	5,000	93,751	31,139	.....	13,699	5,715	9,245	.....	.....	16,218	76,286	7,622	6,621	184,280	36.7
Colombia	.....	.....	.....	.....	2,383	.....	.....	2,383	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,383	0.5
Ecuador	2,820	.....	.....	2,820	278	.....	.....	3,098	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,098	0.6
Peru	3,979	.....	.....	3,979	10,433	.....	.....	14,412	4,374	.....	.....	.....	.....	.....	.....	.....	4,374	.....	.....	18,786	3.7
Total, South America	18,896	53,752	15,960	88,608	20,036	.....	5,000	113,644	35,513	.....	13,969	5,715	9,245	.....	.....	16,218	80,660	7,622	6,621	208,547	41.5
North America:																					
Pacific Coast of United States	33,226	9,288	.....	42,514	.....	6,000	750	49,264	114,809	2,640	984	7,545	623	5,336	10,036	.....	141,973	.....	.....	191,237	38.1
Canada	.....	.....	.....	.....	.....	.....	.....	.....	7,816	.....	.....	.....	.....	.....	4,502	.....	12,318	.....	.....	12,318	2.4
Central America	.....	.....	.....	.....	3,000	.....	.....	3,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,000	0.6
Total, North America	33,226	9,288	.....	42,514	3,000	6,000	750	52,264	122,625	2,640	984	7,545	623	5,336	14,538	.....	154,291	.....	.....	206,555	41.1
Asia:																					
China	.....	.....	.....	.....	.....	.....	1,101	1,101	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,101	0.2
Japan	13,430	.....	.....	13,430	.....	.....	.....	13,430	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13,430	2.7
Philippines and East Indies	7,178	.....	.....	7,178	.....	.....	.....	7,178	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,178	1.4
India	.....	.....	6,661	6,661	.....	.....	.....	6,661	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,661	1.3
Far East[2]	520	.....	.....	520	.....	.....	.....	520	.....	.....	425	.....	.....	.....	.....	.....	425	.....	.....	945	0.2
Total, Asia	21,128	.....	6,661	27,789	.....	.....	1,101	28,890	.....	.....	425	.....	.....	.....	.....	.....	425	.....	.....	29,315	5.8
Australasia:																					
Australia	8,252	.....	.....	8,252	.....	.....	.....	8,252	3,412	.....	.....	.....	.....	.....	.....	.....	3,412	.....	.....	11,664	2.3
New Zealand	13,627	.....	.....	13,627	.....	.....	.....	13,627	20,274	.....	.....	.....	.....	.....	.....	.....	20,274	.....	.....	33,901	6.8
Total, Australasia	21,879	.....	.....	21,879	.....	.....	.....	21,879	23,686	.....	.....	.....	.....	.....	.....	.....	23,686	.....	.....	45,565	9.1
Hawaiian Islands	12,371	.....	.....	12,371	.....	.....	.....	12,371	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12,371	2.5
Grand totals	107,500	63,040	22,621	193,161	23,036	6,000	6,851	229,048	181,824	2,640	15,378	13,260	9,868	5,336	14,538	16,218	259,062	7,622	6,621	502,353	100.0
Per cent of total cargo	21.4	12.5	4.5	38.4	4.6	1.2	1.4	45.6	36.2	0.5	3.1	2.6	2.0	1.1	2.9	3.2	51.6	1.5	1.3	100.0	.....
Percentage last month	46.6	5.1	5.0	56.7	2.2	.....	3.0	61.9	23.6	0.9	2.2	0.9	1.0	0.4	0.5	0.9	33.6	3.0	.....	100.0	.....

[1] By long tons, 2,240 pounds.

[2] General cargo, not routed so as to allow segregation among various ports.

Distribution of cargo passing through the Canal from the Atlantic to the Pacific, October, 1920.[1]

From—	South America.						North America.					Asia.					Australasia.					
	Chile.	Colombia.	Ecuador.	Peru.	West coast, South America.[2]	Total, South America.	Pacific Coast, United States.	Central America.	West coast, Canada.	Pacific terminus, Panama Canal.	Total, North America.	China.	Japan.	Philippine Islands, East Indies.	Far East.[2]	Total, Asia.	Australia.	New Zealand.	Australasia.[2]	Total, Australasia.	Grand total.	Per cent of cargo.
North America:																						
United States—																						
North Atlantic ports	32,230	2,298	.....	.....	10,141	44,669	34,484	.....	.....	.....	34,484	22,800	5,164	2,500	52,389	82,853	44,471	4,925	12,005	61,401	223,407	45.7
South Atlantic ports	37,526	.....	.....	3,968	.....	41,494	5,521	.....	.....	.....	5,521	6,938	8,000	.....	6,355	21,293	.....	3,954	.....	3,954	72,262	14.8
Gulf ports	125	.....	405	1,445	146	2,121	11,754	.....	.....	.....	11,754	18,957	2,539	.....	.....	21,496	.....	.....	.....	.....	35,371	7.2
Total, United States	69,881	2,298	405	5,413	10,287	88,284	51,759	.....	.....	.....	51,759	48,695	15,703	2,500	58,744	125,642	44,471	8,879	12,005	65,355	331,040	67.7
Atlantic terminus, Panama Canal	3,188	3,197	1,656	5,046	602	13,689	2,076	1,685	.....	.....	3,761	.....	.....	.....	.....	.....	.....	.....	.....	.....	17,450	3.5
Mexican Gulf ports	54,161	.....	.....	.....	.....	54,161	.....	.....	.....	10,500	10,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	64,661	13.3
Total, North America	127,230	5,495	2,061	10,459	10,889	156,134	53,835	1,685	.....	10,500	66,020	48,695	15,703	2,500	58,744	125,642	44,471	8,879	12,005	65,355	413,151	84.5
Europe:																						
Belgium	3,500	.....	.....	.....	.....	3,500	4,170	.....	3,290	.....	7,460	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,960	2.2
British Isles	9,748	.....	.....	4,124	.....	13,872	1,521	.....	.....	.....	1,521	.....	.....	.....	.....	.....	.....	32,967	.....	32,967	48,360	10.0
France	1,542	.....	.....	.....	.....	1,542	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,542	0.3
Germany	2,313	.....	.....	.....	1,775	4,088	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,088	0.8
Italy	1,000	.....	.....	.....	.....	1,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,000	0.2
Norway and Sweden	9,052	.....	540	20	.....	9,612	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,612	2 0
Total, Europe	27,155	.....	540	4,144	1,775	33,614	5,691	.....	3,290	.....	8,981	.....	.....	.....	.....	.....	.....	32,967	.....	32,967	75,562	15.5
Grand totals	154.385	5,495	2,601	14,603	12.664	189,748	59,526	1,685	3,290	10,500	75,001	48,695	15,703	2,500	58,744	125,642	44,471	41,846	12,005	98,322	488,713	100.0
Per cent of total cargo, October	31.6	1.1	0.5	3.0	2.6	38.8	12.2	0.3	0.7	2.2	15.4	10.0	3.2	0.5	12.0	25.7	9.1	8.5	2.5	20.1	100.0	.....
Per cent of total cargo, September	37.5	0.5	0.3	0.4	7.8	36.4	17.2	0 4	1.2	2.9	24.7	9.4	8.0	1.5	4.7	23 6	3.2	4 9	7.1	15.[illegible]	100 0	.....

[1] By long tons, 2,240 pounds.

[2] General cargo, not routed so as to allow segregation among various ports.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight December 4, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Laurel Branch	27	11.30	28	6.10	28	13.21	28	14.35	British	F. & W. Ritson	360.0	46.0	17.6	Glasgow	Puntarenas	General	2,633	4,182	3,033
Sydia	24	19.05	28	6.25	28	14.24	28	15.35	Swedish	Transatlantic Steamship Co	385.0	53.7	24.0	Norfolk	Port Chalmers	Coal	6,007	5,420	4,035
Coalinga	27	21.56	28	6.47	28	15.50	29	15.42	American	Union Oil Co	471.0	55.0	27.0	Tampico	Tocopilla	Oil	9,000	8,108	5,877
Bessie Dollar	28	10.15	28	10.45	28	17.48	28	20.02	British	Canadian Robert Dollar Co	369.0	50.0	21.6	Norfolk	Singapore	General	3,200	5,245	3,991
Deisle	28	11.26	28	12.03	28	19.45	28	20.55	American	Luckenbach Line (S. B.)	320.0	46.0	21.0	New York	San Francisco	General	4,250	3,803	2,350
S. C. 284			28	10.40	28	16.03			American	United States Navy				Cristobal	Balboa				
Argosy	28	9.30	29	6.20	29	13.27	29	14.35	American	Wessel Duval & Co. (S. B.)	390.0	51.2	24.0	Norfolk	Paita	Coal and general	6,149	6,161	4,433
Lake Ennis	28	15.52	29	6.40	29	14.13	30	14.22	American	Balt. Trans. Atl. Corp (S. B.)	261.1	43.8	23.0	New York	Santa Cruz	Coal	2,700	2,497	1,644
Mexico	28	12.15	29	9.50	29	17.45	29	18.45	British	Pacific Steam Navigation Co	400.9	52.3	22.2	Liverpool	Valparaiso	General	3,325	6,551	4,205
Agamemnon	29	17.45	30	6.15	30	13.48	30	18.08	British	Alfred Holt & Co	452.0	52.0	25.0	Liverpool	Kobe	General	6,800	6,921	4,873
West Calera	29	1.37	30	6.30	30	14.52	30	16.00	American	Pacific Mail S. S. Co. (S. B.)	410.5	54.0	18.0	Baltimore	San Francisco	General, steel	2,000	6,617	4,925
Chepadoa	30	6.45	30	7.35	30	15.59	1	16.00	American	U. S. & A. S. S. Co. (S. B.)	402.0	53.0	25.0	New York	Brisbane	General mdse	7,100	6,577	4,944
Eldorado	29	13.35	30	7.57	30	16.38	1	16.52	American	Pac. & Caribbean Gulf Line S.B.)	246.0	42.0	18.6	New Orleans	San Francisco	General	2,020	2,439	1,671
Eibergen	30	6.09	30	8.40	30	16.49	30	17.57	Dutch	South Holland Shipping Co	385.0	52.0	15.0	Norfolk	Portland	Ballast		5,354	3,839
Nereus	29	20.28	30	10.14	30	18.45	2	14.54	American	United States Navy	500.0	63.0	28.6	Norfolk	Balboa	Coal, naval sup.	10,001	11,143	6,749
Arawa	29	12.28	30	12.00	30	19.50	30	21.00	British	Shaw Saville & Albion Co	460.0	60.0	28.6	London	Auckland	General	7,000	10,035	7,504
Charles H. Cramp	30	12.11	30	12.50	30	20.58	30	22.27	American	Atl Gulf & Pac. Corp. (S. B.)	404.0	53.9	26.0	Baltimore	San Francisco	General	6,600	6,755	4,688
U. S. S. Turkey[1]	23	7.55	1	8.50	1	17.26	1	18.36	American	United States Navy	182.0	35.0	13.0	Charleston	San Diego				
Perene	24	16.37	1	10.09	1	18.23	1	20.36	Peruvian	Peruvian Line	284.1	39.1	16.0	Cristobal	Callao	General	2,000	2,168	1,529
Jamaica	26	12.47	1	12.18	1	19.48	1	20.58	British	Pacific Steam Navigation Co	220.0	34.0	11.6	Cristobal	Champerico	General	613	1,187	622
San Juan	25	13.35	2	6.05	2	13.35	2	16.25	American	Pacific Mail Steamship Co	283.0	37.0	17.5	Cristobal	San Francisco	General	1,564	2,379	1,593
Manavi	26	16.40	2	6.10	2	13.39	2	15.40	British	Pacific Steam Navigation Co	216.0	35.0	15.0	Cristobal	Guayaquil	General	225	1,357	884
Port Melbourne	1	18.42	2	6.26	2	15.20	3	20.09	American	Commonwealth and Dom. Line	501.0	63.0	29.0	Hull	Auckland	General	12,724	11,861	9,065
Glenpool	2	6.42	2	7.36	2	17.56	4	15.05	American	Standard Oil Co	401.0	53.0	27.0	Puerto Lobos	Balboa	Crude oil	7,500	6,019	4,272
Acajutla	29	21.27	2	7.55	2	15.40	2	21.05	British	Pacific Steam Navigation Co	215.7	33.5	15.1	Cristobal	Tumaco	General	811	1,273	706
Guernica	2	8.35	2	9.30	2	17.40	3	13.10	Spanish	Cia Auxiliar Maritime	338.0	46.0	20.6	Newport News	Iquique	Coal	3,713	3,797	2,540
Satsuma	2	15.06	3	6.30	3	14.21	4	16.20	American	Barber Steamship Co	370.3	48.7	27.1	New York	Manila	General	7,000	5,369	3,960
AzumasanMaru	2	22.10	3	6.32	3	15.17	3	20.03	Japanese	Mitsui & Co	380.0	48.0	25.0	Norfolk	Mejillones	Coal	5,512	4,359	3,397
Altai Maru	3	6.49	3	7.38	3	19.46	4	6.29	Japanese	Osaka Shosen Kaisha	425.0	56.0	22.6	New York	Hongkong	(5)	6,499	7,903	5,635
West Kader	3	8.20	3	8.50	3	20.33	4	9.50	American	Sudden & Christensen (S. B.)	410.0	54.0	24.0	Norfolk	Pearl Harbor	Coal	7,381	6,623	4,599
Palena	29	21.35	3	10.18	3	19.45	3	20.57	Chilean	South American Line	350.0	42.0	23.9	Cristobal	Valparaiso	General	620	3,666	2,577
Ballard[2]	3	4.34	3	12.58	3	20.31			American	United States Navy	310.0	25.0	12.0	Habana	San Diego				
Toyooka Maru	3	18.10	4	6.27	4	14.42	4	16.00	Japanese	Nippon Yusen Kabushiki Kaisha	445.0	58.0	26.3	New York	Yokohama	General	8,329	7,747	5,556
Pelican[3]	30	22.21	4	6.30	4	16.27	4	21.16	American	United States Navy	182.0	35.0	12.0	Norfolk	San Diego				
Clan Murray	3	15.15	4	6.40	4	15.35	4	18.32	British	Cayzar Irvine & Co	415.0	54.0	27.0	Philadelphia	Darien	Case oil	6,800	6,315	4,273
Guatemala	23	17.58	4	9.38	4	18.15	4	19.45	British	Pacific Steam Navigation Co	359.3	45.0	19.3	Cristobal	Valparaiso	General	1,691	4,210	2,744
Laura C. Hall[4]	3	15.25	4	11.10	4	18.07			British	Pacific Metals Corp	81.0	25.0	10.6	Cristobal	Buenaventura	General	25½	130	69
Ebro	3	17.10	4	13.32	4	20.14	4	21.35	British	Pacific Steam Navigation Co	450.0	57.0	25.4	Cristobal	Valparaiso	General	2.726	9,089	6,215

[1] And barge *No. 21.* [2] Destroyer. [3] And barge *No. 1.* [4] Motor schooner. [5] Oil, machinery, angle, tins plates, steel plates, and general.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Point Bonita	27	16.30	28	7.24	28	14.07	30	10.45	American	Pacific Mail Steamship Co.	289.0	44.1	16.10	San Francisco.	Baltimore	(11)	1,967	2,895	1,993
Point Lobos	27	21.00	28	7.58	28	15.30	29	12.35	American	Pacific Mail Steamship Co.	289.0	44.1	19.0	Iquique	Norfolk	Nitrates	3,090	2,895	1,967
S. V. Harkness	28	4.50	28	8.34	28	15.55	29	1.00	American	Standard Oil Co.	419.4	57.2	19.0	Antofagasta	Tampico	Ballast		7,443	5,545
Europa	28	0.30	28	8.57	28	18.35	30	13.05	Italian	La Veloce Line	406.2	53.2	23.6	Valparaiso	Genoa	General	2,017	8,052	4,915
Lavada	26	2.30	28	13.28	28	20.46	28	21.30	American	Luckenbach Steamship Co. (S.B)	402.5	53.0	22.6	Seattle	New York	Lumber, general.	6,061	6,566	4,778
Katherine[6]	27	14.40	28	14.18	28	22.42	29	9.21	American	Venancia Concepcion	275.0	43.5	22.6	Manila	New York	Coconut oil	2,800	2,357	1,795
Santa Paula	29	6.15	29	7.27	29	14.30	30	14.15	American	W. R. Grace & Co.	404.5	53.7	27.0	Iquique	Copenhagen	Nitrates	7,750	6,744	4,825
Apolo	28	16.40	29	7.40	29	15.37	29	15.27	Spanish	Maritima Union	375.3	50.0	23.0	Taltal	Parragona	Nitrates	6,500	4,719	3,522
Palena	29	14.00	29	15.02	29	21.35	3	10.18	Chilean	South American Steamship Co.	350.0	42.1	19.5	Valparaiso	Cristobal	General	797	3,666	2,577
Richeoncal	22	4.00	30	6.36	30	13.40	30	14.18	American	McAllister Bros. (S. B.)	435.0	56.0	19.0	Iquique	Tampico	Ballast		7,642	5,327
Garfield	29	17.10	30	6.42	30	15.30	30	19.20	American	W. R. Grace & Co.	299.4	45.0	20.6	Callao	New York	(12)	2,956	3,228	2,010
U. S. S. Neches	27	16.37	30	7.43	30	16.12	6	5.08	American	United States Navy	475.0	56.0		Balboa	Norfolk	Ballast		Displ	14,800
Dunclutha	30	5.00	30	8.12	30	17.23	30	19.25	British	Glen & Co.	360.0	49.2	23.6	Mejillones	Colon[10]	Nitrates	5,818	4,310	3,213
Argonne	30	13.00	30	13.59	30	21.52	1	13.04	American	Argonne Steamship Co., Inc.	385.0	51.2	26.0	Pisagua	Cristobal[10]	Nitrates	7,500	5,878	4,335
Steel Exporter	30	2.30	1	7.02	1	14.10	1	14.10	American	United States Steel Products Co.	424.2	56.2	26.0	Vancouver, B.C	Avonmouth	General	7,407	7,539	5,448
General G. W. Goethals	1	8.15	1	11.13	1	17.55	3	15.07	American	Panama Railroad Steamship Line	353.1	48.7	20.0	Guayaquil	New York	(13)	1,821	5,125	3,564
Cauca	1	13.45	1	15.02	1	22.23			British	Pacific Steam Navigation Co.	246.0	35.2	12.6	Guayaquil	Cristobal	(14)	289½	1,582	1,023
Eastern Glen	2	7.20	2	9.09	2	16.22	3	23.40	American	Thorndyke & Trenholme (S. B.)	399.9	54.7	24.6	Seattle	Lisbon	Wheat	6,500	6,132	4,330
Nereus [7]	30	18.45	2	15.00	2	22.10	3	17.12	American	United States Government	500.0	60.0		Balboa	Norfolk	Ballast		11,143	6,749
Laura C. Hall[4]	1	8.30	3	6.16	3	15.25	4	11.10	British	Pacific Metals Corp.	81.0	25.6	10.0	Buenaventura	Cristobal	Platinum	(15)	130	69
Essequibo	2	16.45	3	6.22	3	13.50	5	2.14	British	Royal Mail Steam Packet Co.	450.3	57.8	21.0	Valparaiso	New York	General	1,526	9,037	6,089
Hoyetsan Maru	2	15.30	3	6.32	3	15.55	3	17.58	Japanese	Mitsui & Co.	407.2	50.8	26.0	Iquique	Cristobal[10]	Nitrates	60	6,189	4,440
Mantaro	2	21.00	3	8.13	3	16.08			Peruvian	Peruvian Line	360.0	46.0	18.0	Callao	Cristobal	General	1,153	4,838	2,959
Pasadena	28	17.20	3	9.11	3	20.03	4	2.48	American	Callaghan Atkinson & Co. (S.B.)	402.6	53.0	26.0	Callao	Wilmington	Nitrates	7,932	6,329	4,519
Culberson	3	8.30	3	11.35	3	20.17	4	2.05	American	McCormick & McPherson (S.B.)	410.0	54.4	23.9	Seattle	United King.	Wheat	5,863		
St. Anne[8]	3	9.50	3	12.05	3	20.03			British	British Government	135.4	29.5	14.9	Junin	Cristobal[10]				
Sebara[9]	3	9.50	3	13.00					German	Cosmos Line	400.0	52.0	23.6	Junin	Cristobal[10]	Nitrates	5,334		
Oriana	3	6.30	3	14.03	3	21.38	4	2.00	British	Pacific Steam Navigation Co.	465.7	56.2	23.9	Coronel	Liverpool	General	4,458	8,620	5,345
Republic	3	16.00	4	6.30	4	14.50	4	15.40	American	Chile Steamship Co.	345.1	49.1	19.3	Antofagasta	Baltimore	Copper, general.	4,001	4,623	3,372
Salvador	3	17.15	4	6.38	4	14.00			British	Pacific Steam Navigation Co.	215.0	33.5	13.0	Champerico	Cristobal	General, coffee	493½	1,213	692
Chincha	4	1.00	4	7.50	4	16.00	4	16.00	American	Green Star Line	403.0	52.3	26.3	Grays Harbor	Liverpool	Ties, etc.	(16)	6,429	4,624
Glenpool	2	17.56	4	15.17	4	22.20	4	22.20	American	Standard Oil Co. of N. J.	400.0	53.2		Balboa	Port Lobos	Ballast		6,019	4,272

[6] Auxiliary schooner. [7] Collier. [8] Tug. [9] Anchored in Gatun Lake. [10] For orders. [11] Canned goods and general merchandise. [12] Cotton, ore, sugar, and general.
[13] Coffee, cocoa, and hides. [14] Coffee, cocoa, hides, and general. [15] 3 boxes. [16] 3,924,644 feet B. M. Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Nov. 28	Pastores	United Fruit Co.	Port Limon.
Nov. 28	Achilles [17]	Panama Railroad Steamship Line	Norfolk.
Nov. 29	St. Mihiel[18]	United States Army	New York.
Nov. 30	Cartago	United Fruit Co.	New Orleans.
Nov. 30	Ulua	United Fruit Co.	New York via Habana.
Dec. 1	Atenas	United Fruit Co.	New Orleans and way p'ts.

[17] And barge *Darien*.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Nov. 28	Pastores	United Fruit Co.	New York via Habana.
Nov. 28	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Nov. 29	Panama	Panama Railroad Steamship Line	Puerto Colombia.
Nov. 29	Tyne	Royal Mail Steam Packet Co.	Cartagena.
Nov. 29	Corning	Standard Oil Co.	Tampico.
Nov. 30	Logan[18]	United States Army	San Juan.

[18] Transport.

(Continued on page 245, column 2.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending December 4, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Neches	United States Navy	November 27.	November 30.	7,429	.....
Nereus	United States Navy	November 30.	.....	10,000	.....
Laura C. Hall	Pacific Metals Corporation, Ltd.	December 1.	December 3.	27	.....
Cauca	Pacific Steam Navigation Co.	December 1.	December 1.	2	.....
Gen. Geo. W. Goethals	Panama Railroad Steamship Line.	December 1.	December 1.	38	.....
San Juan	Pacific Mail Steamship Co.	December 2.	December 2.	.....	4
Acajutla	Pacific Steam Navigation Co.	December 2.	December 2.	.....	36
Manavi	Pacific Steam Navigation Co.	December 2.	December 2.	.....	1
Glenpool	Standard Oil Company of N. J.	December 2.	December 4.	8,571	.....
Salvador	Pacific Steam Navigation Co.	December 3.	December 4.	11	.....
Laura C. Hall	Pacific Metals Corporation, Ltd.	December 4.	December 4.	.....	114
Guatemala	Pacific Steam Navigation Co.	December 4.	December 4.	.....	1

Prices of Miscellaneous Supplies.

The following are prices to individuals and companies, including the 25 per cent surcharge, effective December 1, 1920:

Commodities.	Unit.	Price.
Brass, bar	Lb.	$0.44
Brass, sheet	Lb.	.75
Bronze, Tobin	Lb.	.375
Cement, at Panama:		
Including bag and surcharge	Bag	2.11
Credit for empty bag returned	Bag	.25
Cement, at Colon:		
Including bag and surcharge	Bag	1.95
Credit for empty bag returned	Bag	.25
Charcoal	Cwt.	1.875
Copper, bar	Lb.	.44
Gasoline, motor grade, in drums	Gal.	.56
Lead, sheet	Lb.	.17
Lead, pig	Lb.	.125
Lumber, yellow pine or fir, except ceiling	M ft. B. M.	100.00
Lumber, ceiling, siding, and flooring, 1" x 6"	M ft. B. M.	118.75
Lumber, flooring, 1" x 3" and 1" x 4"	M ft. B. M.	143.75

Lumber, native, prices per 1,000 feet board measure:

Kind.	Rough. Green.	Rough. Kilned.	Dressed. Green.	Dressed. Kilned.
Almendra	$106.25	$118.75	$115.00	$127.50
Alcavu	87.50	100.00	96.25	108.75
Alcareto	106.25	118.75	115.00	127.50
Amargo	106.25	118.75	115.00	127.50
Bateo	62.50	75.00	71.25	83.75
Cedro Amargo	106.25	118.75	115.00	127.50
Caoba Blanca	87.50	100.00	96.25	108.75
Guayacan	137.50	150.00	146.25	158.75
Maria	62.50	75.00	71.25	83.75
Pilon	75.00	87.50	83.75	96.25
Roble	62.50	75.00	71.25	83.75
Mangle Colorado	106.25	118.75	115.00	127.50
Nispero	137.50	150.00	146.25	158.75

Notes:

1. Second grade Alcavu $68.75
2. Second grade Caoba Blanca 68.75
3. Second grade Cedro Amargo 93.75
4. Almendra, special 75.00
5. Alcareto, special 75.00
6. Amargo, special 75.00
7. The charge for dressing and kiln-drying the same for second grade as first grade.
8. The charge for dressing 2 sides or 4 sides lumber the same.

Commodities.	Unit.	Price.
Metal, yellow	Lb.	$0.375
Nuts, iron, machine, hexagon	Lb.	.25
Nuts, iron, machine, hexagon	Lb.	.225
Nails, common wire	Lb.	.11
Nails, galvanized	Lb.	.15
Oakum, navy, spun	Lb.	.20
Oakum, navy, unspun	Lb.	.175
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl of 42 gals	3.50
Oil, fuel, at Balboa and Cristobal, in drums or barrels, no surcharge	Bbl of 42 gals	3.75

Commodities.	Unit.	Price.
Oils, greases, and lubricants:		
Oil, air, compressor cylinder	Gal.	$0.575
Oil, ammonia cylinder	Gal.	.685
Oil, burning	Gal.	1.56
Oil, cylinder, dark, marine	Gal.	1.125
Oil, cylinder, dark, marine	Gal.	1.25
Oil, ice, machine, steam	Gal.	1.00
Oil, engine, dynamo	Gal.	.79
Oil, engine, in tins	Gal.	.69
Oil, engine, in barrels	Gal.	.65
Oil, gas, engine, heavy, in barrels	Gal.	1.05
Oil, gas, engine, in cases, heavy	Gal.	1.175
Oil, gas, engine, in drums, medium	Gal.	.66
Oil, kerosene, in drums	Gal.	.375
Oil, kerosene, in tins (cases)	Gal.	.45
Oil, linseed, boiled	Gal.	2.50
Oil, linseed, raw	Gal.	2.60
Oil, locomotive engine	Gal.	.59
Oil, lard	Gal.	2.125
Oil, marine engine	Gal.	1.06
Oil, marine engine	Gal.	.625
Oil, marine engine	Gal.	.44
Oil, marine engine	Gal.	.75
Oil, marine engine	Gal.	1.02
Oil, mineral seal	Gal.	.375
Oil, nonliquid	Lb.	.09
Oil, stationary engine	Gal.	.49
Oil, sperm	Gal.	2.875
Oil, gas engine motor, heavy	Gal.	.94
Oil, signal	Gal.	1.40
Oil, valve	Gal.	.975
Oil, car	Gal.	.34
Grease, black gear	Lb.	.115
Grease, yellow, cup, No. 3	Lb.	.14
Grease, yellow, cup, No. 5	Lb.	.17
Grease, rod, special	Lb.	.25
Grease, tunnel bearing	Lb.	.215
Tallow	Lb.	.225
Turpentine	Gal.	2.40
Turpentine, substitute	Gal.	.69
Vaseline	Lb.	.15
Paint, white, lead, dry	Lb.	.175
Paint, white, lead, in oil	Lb.	.175
Paint, white, zinc, dry	Lb.	.225
Paint, white, zinc, in oil	Lb.	.21
Paint, zinc, 35 per cent in oil	Lb.	.19
Rivets	Lb.	.10
Rope, Manila, ½" diameter	C. ft.	.69
Rope, Manila, ⅝" diameter	C. ft.	1.50
Rope, Manila, ¾" diameter	C. ft.	2.50
Rope, Manila, ⅞" diameter	C. ft.	4.185
Rope, Manila, 1" diameter	C. ft.	5.075
Rope, Manila, 1¼" diameter	C. ft.	7.00
Rope, Manila, 1" diameter	C. ft.	8.75
Rope, Manila, 1½" diameter	C. ft.	12.90
Rope, Manila 1¾" diameter	C. ft.	19.69
Rope, Manila, 1¾" diameter	C. ft.	26.81
Rope, Manila, 2" diameter	C. ft.	31.44
Rope, Manila, 2½" diameter	C. ft.	51.50
Rope, Manila, 3" diameter	C. ft.	76.25
Rope, Manila, 3½" diameter	C. ft.	91.25
Rope, Manila, 4" diameter	C. ft.	124.125
Soap, laundry	Lb.	.175
Soda, ash	Lb.	.05
Steel, bar	Lb.	.06
Steel, spring	Lb.	.21
Steel, cold, round (rolled)	Lb.	.20
Steel, sheet	Lb.	.06
Steel structural (angles, beams, etc.)	Lb,	.06
Tin, block	Lb.	.69
Tin, banca	Lb.	.625
Tin, sheet	Lb.	.225
Washers, cut	Lb.	.15
Waste, colored	Lb.	.26
Waste, white	Lb.	.26
Zinc, boiler plate, ⅝" x 6" x 12"	Lb.	.17

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama; in the United States, "Pancanal, Washington."

Executive Order.[1]

WHEREAS, by Executive Order No. 2825, dated March 25, 1918, certain lands within the Canal Zone were set apart for the protection of the Panama Canal and for use as a military reservation in connection therewith, the same constituting and being known as the Fort Sherman Military Reservation.

AND WHEREAS, certain additional lands located southwesterly and across the Rio Chagres from the said reservation are deemed necessary for the said purposes.

NOW THEREFORE, I, WOODROW WILSON, President of the United States, do hereby set apart for the protection of the said canal and for use for military purposes in connection therewith the said additional lands, and declare the area hereinafter described, which includes both the lands originally reserved by said Executive Order No. 2825 and the said additional lands, to constitute the Fort Sherman Military Reservation. The said reservation shall remain subject, however, to the civil jurisdiction of the Canal Zone authorities, in conformity with the Panama Canal Act of August 24, 1912 (37 Stat. 560, 569). The boundaries of the reservation so declared are described as follows:

Beginning at the southwest end of the Toro Point Breakwater, Latitude No. 9 degrees 22 minutes 26.29 seconds, Longitude 79 degrees 57 minutes 06.49 seconds W., the boundary follows the low water line of Limon Bay to a concrete monument on right bank of the mouth of the Rio Petitpie (erroneously called Rio Pilibio in the previous Executive Order) Latitude N. 9 degrees 19 minutes 15.48 seconds, Longitude 79 degrees 57 minutes 14.48 seconds W.; thence S. 49 degrees 15 minutes W., 12,300 feet to a concrete monument on the left bank of the mouth of the Rio Mojinga, approximate Latitude N. 9 degrees 17 minutes 55.82 seconds, approximate Longitude 79 degrees 58 minutes 47.55 seconds W.; thence approximately S. 51 degrees 48 minutes 26 seconds W.. approximately 8,451 feet to Canal Zone boundary monument 109, approximate Latitude N. 9 degrees 17 minutes 3.98 seconds, approximate Longitude 79 degrees 59 minutes 53.87 seconds W.; thence S. 7 degrees 48 minutes W., 582 feet along the Canal Zone boundary to the north branch of the Rio Pina, thence down the north branch of the Rio Pina to monument on the right bank of the same river opposite the mouth of the Quebrada Muni, thence N. 64 degrees W. to the mouth of the Rio Majagual on the Caribbean Sea, thence northeastward along the coast to the mouth of the Rio Chagres; thence northeast along the low water line of the Caribbean Sea to the initial point.

The above area is shown on drawing 2407 of the Office of the District Engineer, Corps of Engineers, U. S. Army, Balboa Heights, Canal Zone.

There shall also be included in the said area all of the lands and water for a distance of one hundred yards out to sea from the high water line on all shores of the reservation; but the right to navigate and control the flow of the Chagres River is reserved to the authorities of the Canal Zone.

THE WHITE HOUSE,
6 Nov., 1920.

WOODROW WILSON

[No. 3352.]

[1] Published as Panama Canal circular No. 601-115.

Save Water.

The consumption of water in Panama City where water is paid for by the landlord or user at the rate of 25 cents per thousand gallons is approximately 67 gallons per day per capita. The consumption in the Canal Zone ranges from 400 to 600 gallons per capita, no charge being made against the user. During the recent war, the consumption of water in the large concentration camps in the United States was less than 70 gallons per capita.

The above figures indicate that a large amount of water is wasted on the Canal Zone.

The amount of water consumed is rapidly nearing the capacity of the filtration plants and unless this large consumption per capita is reduced stringent measures will have to be taken. The problem is presented in this manner to users of water on the Canal Zone in an effort to bring the consumption down without further action. There is plenty of water for all needs, but none for waste.

The cooperation of all employees of The Panama Canal will secure the desired result.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights (telephone 286):

Assistant horticulturist (male and female); $2,040 to $2,280 a year; form 2118; No. 672; age, 21 but not 45 years; vacancies exist in Bureau of Plant Industry, Department of Agriculture; December 21, 1920.[1]

Associate technologist, $2,000 to $2,800 a year; assistant technologist, $1,400 to $1,800 a year; form 1312; No. 648-amended; age, within reasonable age limits, vacancies exist in the Bureau of Standards, Department of Commerce.[2]

Forest assistant (male and female); $1,100 to $1,200 a year; form 1312; No. 138; age, 20 but not 50 years; vacancies in the Indian Service; January 5 and 6, 1921.

Examiners, Estate Tax Division (male and female); $1,800 to $2,750 a year; form 2118; No. 675; age, 25 but not 45 years; vacancies in the office of the Deputy Commissioner of Internal Revenue, Treasury Department, Washington, D. C.; March 1, 1921.[1]

Hollerith tabulating and power accounting machine expert (male and female); $2,000 to $2,500 a year; form 1312; No. 673; age, 20 but not 55 years; vacancies exist in the Bureau of War Risk Insurance; December 21, 1920.[1]

Junior physicist (male and female); $1,500 to $1,800 a year; form 1312; age, under 40 years; vacancies exist in the Bureau of Mines, Department of the Interior; December 28, 1920.[1]

Library assistant; No. 647-amendment; age limit changed to a maximum of 45 years; December 15, 1920.

Marine engineer (male and female); $3,000 to $5,000 a year; No. 174; form 2118; age, under 50 years; vacancies exist in the office of the Chief of Transportation Service, War Department; December 28, 1920.[1]

Special agent (male and female); $1,500 to $3,000 a year; No. 671; form 1312; age, 25 but not 45 years; vacancies exist in the Bureau of Internal Revenue, Treasury Department; December 15, 1920.

Special field assistant in crop acclimatization (male and female); $2,040 to $2,400 a year; form 2118; age, 25 but not 45 years; vacancies exist in the Bureau of Plant Industry, Department of Agriculture; December 28, 1920.[1]

Surveyor-draftsman (male); $1,400 to $2,100 a year; form 1312, No. 328-amended, age, within reasonable age limits; vacancies exist in the Forest Service; December 28, 1920.[1]

Warehouse inspector (male and female); $1,500 to $2,500 a year; No. 664; form 2118; age, 21 but not 60 years; vacancies exist in the Bureau of Markets, Department of Agriculture; December 14, 1920.[1]

Aid, Division of Reptiles (male and female); $1,200 a year; form 1312; announcement No. 4; age, 18 but not 55 years; vacancies exist in the National Museum, Washington, D. C.; January 5, 1921.

Associate in clinical psychiatry and psychotherapy (male and female); $2,500 a year; form 2118; announcement No. 682: age, within reasonable age limits; vacancies exist at St. Elizabeth s Hospital, Washington, D. C.; December 28, 1920.[1]

Instrument man (male and female); $5.20 to $8.40 per diem; form 1312; announcement No. 693; age, 22 but not 55 years; vacancies exist in the Navy Yard Service; March 1, 1921.[1]

Lithographic map engraver (male and female); $1,200 to $1,500 a year; form 1800; announcement No. 692; age, 21 but not 40 years; vacancies exist in the Geological Survey, Washington, D. C.; December 28, 1920.[1]

Oil gauger (male and female); $1,200 to $1,500 a year; form 1312; announcement No. 686; age, 20 but not 55 years; vacancies exist in the Pawnee Indian Agency, Oklahoma; December 28, 1920.[1]

Ordnance research engineer (male and female); $2,000 to $5,000 a year; form 1312; announcement No 689; age, within reasonable age limits; vacancies exist at Frankford Arsenal, Philadelphia, Pa.; December 28, 1920.[1]

Preparator, Anthropological Laboratory (male and female); $75 a month; form 304; announcement No. 2; age, 18 but not 55 years; vacancies exist in the National Museum, Washington, D. C.; January 5, 1921.

Shepherd (male and female); $1,200 a year; form 304; announcement No. 5; age, below 45 years; vacancies exist at the Animal Industry Experimental Farm, Beltsville, Md.; January 5, 1921.

Operative; announcement No. 593-amendment; change of age limit to 35 years; December 15, 1920.

Clerk, Panama Canal Service; announcement No. 609-amendment; change of entrance salary from $116 a month and upward to $106 to $137.50 a month; December 8, 1920.

Guard, announcement No. 613-amendment; register of eligibles from this examination will be used only for filling vacancies in the Penitentiary Service, Leavenworth, Kans., Atlanta, Ga., and McNeil Island, Wash.; December 28, 1920.

Chief, section of medical referees (male and female); $4,000 to $6,000 a year; form 1312; age, within reasonable age limits; vacancy in the Bureau of War Risk Insurance, Washington, D. C.; January 11, 1921.[1]

Inspector, child labor tax division (male and female); $1,800 to $2,500 a year; form 2118; announcement No. 659; age under 55 years; vacancies exist in the Bureau of Internal Revenue, Treasury Department; January 11,1921.[1]

Medical referee; $3,600 to $4,000 a year; assistant medical referee; $3,000 a year; form 1312; age, within reasonable age limits; vacancies exist in the Bureau of War Risk Insurance, Washington, D. C.; April 5, 1921.[1]

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[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

[2] Nonassembled. Applications will be received at any time until further notice.

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings, or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Joseph Duncan	22748	Antigua	Colon	Coaling Station	November 29, 1920
Henry Welsh	23317	Grenada	Fox River	Panama Railroad	November 19, 1920

Official Circulars.

Acting Governor.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 4, 1920.

To all concerned—Effective December 5, 1920, and during my absence from the Isthmus, Col. J. J. Morrow, U. S. A., Engineer of Maintenance, will be Acting Governor.

CHESTER HARDING,
Governor.

Exercising Duties of President of the Panama Railroad Company.

PANAMA RAILROAD COMPANY,
OFFICE OF THE PRESIDENT,
BALBOA HEIGHTS, C. Z., December 4, 1920.

To all concerned—Effective December 5, 1920, and during my absence from the Isthmus, Col. J. J. Morrow, U. S. A., 2d Vice President, will exercise such duties of the President as relate to the operations of the company on the Isthmus.

CHESTER HARDING,
President, Panama Railroad Company.

Acting Auditor and Acting Assistant Auditor.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 4, 1920.

To all concerned—Effective December 5, 1920, and during the absence of Mr. H. A. A. Smith, Mr. Elwyn Greene will act as Auditor, and Mr. W. H. Kromer as Assistant Auditor on the Isthmus.

CHESTER HARDING,
Governor.

Diposition of Surplus and Unserviceable Electric and Pneumatic Tools.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., November 23, 1920.

CIRCULAR No. 631-8:

1. Circular No. 631-2, dated October 31, 1914, authorizing the delivery of all surplus and unserviceable electric and pneumatic tools to the General Storekeeper of the Supply Department at Balboa without survey, is canceled.

2. Such items which hereafter become surplus will be accepted into stock by the General Storekeeper at Balboa in like manner as other standard stock, provided the particular make of tool on which disposition is required is covered by the standard-stock list. In cases where such tools become unserviceable, or are not considered standard stock, they will be presented to the Surveying Officer for disposition in like manner as other miscellaneous nonexpendable property.

CHESTER HARDING,
Governor, The Panama Canal.
President, Panama Railroad Company.

Private Work Performed by Employees.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., November 29, 1920.

CIRCULAR No. 641-2:

1. There is usually no objection to private work being done by employees on time outside of their working hours, provided the work is legitimate and not in conflict with the regulations of The Panama Canal.

2. Employees are directed to refrain, except in their proper official capacity, from giving any estimate, information, promise or agreement, covering any work, contract, sale or business transaction in which the United States Government, The Panama Canal or the Panama Railroad Company is, or may possibly become, interested.

3. Employees intending or desiring to engage in any enterprise or employment outside their regular duties, on time after working hours, or during leave, should, if there is any room for doubt regarding the application of the above instructions, apply to this office for permission to engage in the enterprise, giving such information regarding same as is necessary for a decision.

4. The object of these instructions is to protect both the Administration and the employee from embarrassment, and if violated, the employee will be subject to immediate discharge or discipline according to the merits of the case.

CHESTER HARDING,
Governor, The Panama Canal.
President, The Panama Railroad Company.

Sick Leave for Alien Employees.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., November 29, 1920.

CIRCULAR No. 602-23:

Circular No. 602-18 is hereby modified to provide for the payment of compensation for time lost on account of sickness to all alien employees of The Panama Canal and the Panama Railroad Company, except those for whom provision is made under general conditions of employment as provided for in the Executive Order of February 2, 1914,[1] and modifications thereof by the Executive Orders of January 15, 1917,[2] and February 20, 1920.[3]

CHESTER HARDING,
Governor, The Panama Canal.
President, The Panama Railroad Company.

[1] Published as Panama Canal Circular No. 601-4.

[2] Published as Panama Canal Circular No. 601-59.

[3] Published as Panama Canal Circular No. 601-107.

Licensing of Motorcycle Operators.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 1, 1920.

CIRCULAR No. 723-2:

By virtue of the authority contained in Section 5 of the Executive Order of October 9, 1918, pro-

viding for the licensing of chauffeurs in the Canal Zone, published as Panama Canal Circular No. 601-83, and Executive Order of October 30, 1920, published as Panama Canal Circular No. 601-114, the following rules to govern the issuance of licenses to motorcycle operators are hereby established:

(*a*) Application and examination for and issuance of licenses of motorcycle operators will be made on the form and under the procedure described in Panama Canal Circular No. 723, dated November 23, 1918.

(*b*) The license card issued will specifically state that the holder is only authorized to operate motorcycles, and will be of different color than those issued to operators of automobiles.

CHESTER HARDING,
Governor.

Sailing of the S. S. "Panama."

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
BALBOA HEIGHTS, C. Z., December 6, 1920.

To all concerned—The steamship *Panama* will sail from Cristobal for New York, via Port au Prince, Haiti, on Thursday, December 9, at 3 o'clock p. m.

S. W. HEALD,
Superintendent.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., November 30, 1920.

The following insufficiently addressed mail matter has been received in the office of the Director of Posts and may be obtained upon request of the addressee. Requests can be made by calling telephone 182, Balboa:

Adams, W.
Barrett, Mr. William
Bryant, J. H.[1]
Bubb, John Carroll
Butcher, Clarence A.[1]
Cheney, E. F.
Collins, Mrs. James
Collins, Mr. James (2)
Collins, Mr. Thos.
Copas, Mr. Clark
Corpron, T. F.
Diaz, Sra. Celina Maria
Edward, Andrew, Box 389
Fraser, Mr. Vernal
Frosythe, Mr. Dan
Gordon, Mr. G.
Greene, Mr. Royal K.
Henrihan, Mrs. Georgie M.
Jackson, Mr. Frank
Jinhoff, Harry B.
Kaye, Mr. H. R.[2]
Knoope, Esq., Ray M.
Lewis, Mr. Tom
Lynch, Esq. John
Martin, Mr. I. F.
Merrifield, Mr. Lee[3]
Miller, Mrs. A. I.[1]
Murray, Harold W.
McCoy, Mrs.
Nicholson, Mrs. R. W.[1]
Parkinson, Mr. Winfield
Patten, Hudson T.
Pruitt, Mr. H. A.
Ramfourd, Mrs.
Raynor, Mr. Ernest G.
Rodreguez, Mr. L.
Smith, Miss Rose
Stone, Mrs. C. W.
White, Mr. Fred G.
Wilson, Mr. Ralph
Witherell, Marion
Wright, Bruce
Wright, Mrs. M. S., Box 643[4]

[1] Paper. [2] Magazine. [3] Card. [4] Package.

Cable Notice.

The All-America Cables, Inc., has advised: "Normal route to Porto Rico, St. Thomas, St. Croix, St. Kitts, Antigua, Guadeloupe, Dominica, St. Lucia, St. Vincent, Barbados, Grenada, Trinidad, and British Guiana restored. Normal rates should be collected."

Additions to Commissary Stock.

Dry Goods Section.

Chemise, envelope, ea	$3.20
Chemise, envelope, ea	1.50
Drawers, open, ladies', pr	1.60
Drawers, open, ladies', pr	1 25
Petticoats, ea	2.15
Petticoats, ea	3.25
Petticoats, ea	1.40
Shirts, men's, negligee, coat style, printed, striped, Madras, ea	3.05

MOVEMENTS OF OCEAN VESSELS.—Continued from page 239.

PORT OF CRISTOBAL—continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Dec. 2	Turrialba	United Fruit Co.	Cartagena.
Dec. 2	H. M. S. Cambrian	British Government	La Guayra.
Dec. 2	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Dec. 3	Whippoowill	United States Navy	Unknown.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Nov. 30	Antonio Lopez	Spanish Line	Puerto Colombia.
Dec. 1	Atenas	United Fruit Co.	New Orleans.
Dec. 1	Ulua	United Fruit Co.	Port Limon.
Dec. 2	Cartago	United Fruit Co.	New Orleans via Bocas del Toro and Habana.
Dec. 2	Turrialba	United Fruit Co.	New York via Kingston.
Dec. 2	Achilles[17]	Panama Railroad Steamship Line.	Norfolk.
Dec. 3	H. M. S. Cambrian	British Government	Port Limon.
Dec. 3	Whippoowill	United States Navy	Unknown.
Dec. 4	St. Mihiel[18]	United States Army	New York.
Dec. 4	U. S. S. Owl	United States Navy	Hampton Roads and way-ports.

PORT OF BALBOA.

None				Nov. 28	Guardian[19]	All-America Cables Co.	Callao.

[19] Cable ship.

*Other than ships passing through the Canal.

Additions to Commissary Stock.

Dry Goods Section.

Suiting, English:	
Art linen, natural color, yd	$0.86
Am. Cashmere, shrunk, yd	6.95
Ties, four-in-hand, fancy silk, ea	1.25
Ties, four-in-hand, fancy silk, ea	1.65
Ties, four-in-hand, fancy silk, ea	2.05
Ties, four-in-hand, fancy silk, ea	2.65
Ties, four-in-hand, knitted silk, ea	2.50
Ties, four-in-hand, knitted silk, ea	2.05
Ties, four-in-hand, knitted silk, ea	1.50
Ties, bat wing, assorted silk, ea	.51
Ties, four-in-hand, assorted fancy silk, ea.	.57
Ties, four-in-hand, assorted fancy silk, ea.	.85
Ties, four-in-hand, assorted fancy silk, ea.	1.00
Ties, batwing, assorted fancy silk, ea	.57
Ties, boys', four-in-hand, fancy silk, plaids, ea	.44
Ties, boys', four-in-hand, ea	.57
Aprons, cotton, embroidered, Swiss, fancy, ea	1.05
Brushes, shaving, bone handle, jap., ea	.17
Brushes, shaving, bone handle, jap., ea	.23
Brushes, nail, jap., ea	.13
Brushes, tooth, jap., ea	.15
Brushes, hair, jap., ea	.70
Brushes, hair, jap., ea	.84
Brushes, hair, jap., ea	1.95
Brushes, hair, jap., ea	.92
Brushes, tooth, jap., ea	.10
Brushes, military, jap., ea	.85
Brushes, cloth, jap., ea	.83
Brushes, hair, jap., ea	1.30
Brushes, military, jap., ea	.91
Brushes, military, jap., ea	1.20
Brushes, military, jap., ea	1.30
Brushes, tooth, jap., ea	.15
Brushes, hair, jap., ea	1.05
Brushes, nail, jap., ea	.08
Brushes, nail, jap., ea	.12
Sets, lunch, white, sc., embroidered, 1 cl., 45″ x 45″, 6 napkins, 18″ x 18″, set	12.40
Sets, lunch, white, sc., embroidered, 1 cl., 45″ x 45″, 6 napkins 18″ x 18″, set	13.70
Sets, lunch, blue, sc., embroidered, 1 cl., 45″ x 45″, 6 napkins 18″ x 18″, set	11.10
Sets, lunch, blue, sc., embroidered, 1 cl., 45″ x 45″, 6 napkins 18″ x 18″, set	12.40
Sets, lunch, blue, sc., embroidered, 1 cl., 45″ x 45″, 6 napkins 18″ x 18″, set	$13.70
Centers, linen, 20″, ea	1.60
Centers, linen, 24″, ea	1.80
Centers, linen, 36″, ea	3.40
Cloths, linen, H. S., sideboard, 18″ x 45″, ea	1.70
Cloths, linen, H. S., sideboard, 18″ x 54″, ea	2.00
Cloths, linen, H. S., sideboard, 18″ x 63″ ea	2.30
Cases, linen bag pillow, 22½″ x 42″, pr	5.55
Cases, linen bag pillow, 22½″ x 42″, pr	6.40
Chemises, envelope, cotton, embroidered, Swiss, ea	3.85
Sets, lunch, white, sc., embroidered, 1 cl., 45″ x 45″, 6 napkins 18″ x 18″, set	11.10
Suiting, English, cotton, 54″, yd	4.00
Suiting, all wool, 56″, yd	5.55
Suiting, white cotton drill, 27/28″, yd	.67
Suiting, white linen duck, 27/8″, yd	3.05
Suiting, mercerized, 27″, yd	.83
Suiting, Union crash, 35/36″, yd	.80
Cloth, bleached, double thread, Terry, yd.	.51
Collars, soft, Arrow brand, Hart style, ea.	.45
Corsets, Nulife, ea	3.80
Corsets, Nulife, ea	4.45
Leads, N. B., Eversharp, tube	.20
Leads, Eversharp, tube	.20
Pencils, Eversharp, gold filled, ea	2.85
Pencils, Eversharp, gold filled, ea	2.45
Pencils, Eversharp, gold filled, ea	3.65
Pencils, Eversharp, gold filled, ea	3.65
Pencils, Eversharp, gold filled, ea	4.45
Petticoats, silk and cotton, ea	3.20
Petticoats, silk and cotton, ea	3.55
Shirts, negligee, silk fiber crepe, stripes only, ea	5.40
Suiting, black dress coating, 57/58″, yd	5.90
Ties, silk, fancy, assorted, batwing, ea	1.25
Ties, men's, batwing, fancy silk, 2″, ea	.76
Ties, men's, batwing, fancy silk, ea	1.05
Ties, batwing, fancy silk, ea	.90
Ties, batwing, fancy silk, ea	.56

Grocery Section.

Collops, minced, 2s tin	.50
Pudding, plum, Heinz, 1s tin	.51

Schedule of Official Jitney Service.

Following is the schedule of the official jitney plying between Balboa shops and the Ancon police station, carrying employees in the conduct of official business, upon presentation of passes issued by the Chief Quartermaster or of the "special pass" issued by the Governor:

FROM ANCON POLICE STATION TO BALBOA SHOPS.

Police Station	Leave on the hour and half hour.
Administration Building	Leave 7 minutes and 37 minutes after the hour.
Balboa Commissary	Leave 10 minutes and 40 minutes after the hour.
Balboa shops	Arrive 15 minutes and 45 minutes after the hour.

FROM BALBOA SHOPS TO ANCON POLICE STATION.

Balboa shops	Leave 15 minutes and 45 minutes after the hour.
Port Captain's Office	Leave 18 minutes and 45 minutes after the hour.
Balboa Commissary	Leave 20 minutes and 50 minutes after the hour.
Administration Building	Leave 25 minutes and 55 minutes after the hour.
Ancon Police Station	Arrive on the hour and half hour.

Route Service Jitney—Cristobal-Mt. Hope.

The following is the schedule of the official jitney service between the Terminal building at Cristobal and Mount Hope. Cars stop at the office of the Commissary Division each way:

Leave Terminal Building.		Leave Mount Hope.	
A. M.	P. M.	A. M.	P. M.
8.00	12.30	8.15	12.45
8.30	1.00	8.45	1.15
9.00	1.30	9.15	1.45
9.30	2.00	9.45	2.15
10.00	2.30	10.15	2.45
10.30	3.00	10.45	3.15
	3.30		3.45

COMMISSARY NOTES.

Linen.

A natural color art linen, suitable for making centerpieces, scarfs, and many other items, is now being offered at the commissaries at 86 cents the yard. It is 29 inches wide and is carried under the stock number 17781.

Drill.

For wear in the tropics, it would be difficult to find any material better adapted than white drill. A very good quality has just been received and will be sold to customers at 67 cents the yard.

Native Hardwood Articles for Christmas Gifts.

Articles of native hardwoods are now available at Ancon, Balboa, Cristobal, Gatun, and Pedro Miguel commissaries. These will make very desirable Christmas gifts, included among them being electric table lamps, nut bowls, hair receivers, powder boxes, and smoking stands.

Lace, Etc.

Swiss embroideries, edgings, and insertions ranging in price from 5 cents to $1.50 the yard, are offered at all commissaries, at a special sale now in progress. Also received directly from Switzerland are handkerchiefs of cotton lawn, finely embroidered and hemstitched, which are sold at very reasonable prices.

Books.

Books received:

Pictures of the Panama Canal, by Joseph Pennell; The Man of the Forest, by Zane Grey; Red and Black, by Grace Richmond; Ramsey Milholland, by Booth Tarkington; The Story of Siegfried, by Dr. Edward Brooks, A. M.; The Courage of Marge O'Doone, by James Oliver Curwood; Back to God's Country, by James Oliver Curwood; Love Stories, by Mary Roberts Rinehart; The Strength of the Strong, by Jack London; Big Flat, by Henry Oyen; The U. P. Trail, by Zane Grey; The House of Torchy, by Sewell Ford.

Dress Goods.

Unusual values are represented in the Swiss all-over embroidered voiles now offered in the retail stores. These are 44 inches wide and are sold for $1 the yard. A wide range of patterns is to be found in the embroidered voile flouncing 44 inches wide at $1.40 per yard. All-over embroidered organdie 52 inches wide is offered at $1.05 the yard, and all-over embroidered dotted voile in lavender, pink, light blue, and delft blue may be had for $1 the yard. In addition to these, there is an imported Swiss organdie, in various popular shades, which is 45 inches wide and priced at $1.10 the yard.

Brushes.

Special bargains are to be found in a recent shipment of brushes from the Orient. There are toothbrushes with white bone handles at 10 cents and 15 cents, nail brushes with solid wood backs at 8 cents, 10 cents, and 13 cents, a limited quantity of military brushes with real ebony backs at 83 cents, 91 cents, $1.20, and $1.30, hair brushes with black hardwood backs at prices ranging from 70 cents to $1.95 and a small number of shaving brushes with white bone handles, which are offered at 17 cents and 23 cents.

Minton Chinaware.

Some time since the attention of the Commissary Division's representative in London was called to the nonreceipt of red flower or rose Minton cups and saucers which have not yet arrived although requisitioned many months ago. A cable also was dispatched to expedite delivery of other items in this pattern which long had been on order. The situation is explained at length in the reply just received. The manufacturers maintain that they are doing their best with the Commissary Division's orders. The works are at present practically closed down owing to the coal strike, so they will be unable to do much until the mines are again in working order. The makers understand the inconvenience to which commissary customers, trying to complete their sets, have been put, but give their assurance that The Panama Canal stores are doing very well in comparison with other buyers. It is also stated that the urgency of our requirements has not been and will not be lost sight of, but no definite dates for delivery are set.

PANAMA RAILROAD PASSENGER TRAIN TIME-TABLE No. 30, EFFECTIVE DECEMBER 26, 1919.

MAIN LINE STATIONS.	DAILY.			Daily except Sat'day	Sat'day only.	Sunday only.
	3	5	7	101	9	11
Leave	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.
Colon	7.10	11.00	5.00	11.15	11.30	9.35
Mount Hope	7.15	11.05	5.05	11.20	11.35	9.40
New Gatun	.....	.....	.....	11.28	11.43	.....
Gatun	7.27	11.17	5.17	11.40	11.40	9.52
					A. M.	
Monte Lirio	7.42	11.32	5.32	11.55	12.04	10.07
				A. M.		
Frijoles	7.53	11.43	5.43	f12.10	12.15	10.18
Darien	8.00	11.50	5.50	f12.18	12.22	10.25
		P. M.				
Gamboa	8.14	12.02	6.02	12.30	12.33	10.37
Summit	8.30	12.14	6.14	f.2.42	12.45	10.49
Pedro Miguel	8.44	12.25	6 24	1.00	12.57	11.01
Red Tank	.....	.....	6.26	.....	1.00	11.04
Miraflores Locks	8.50	12.32	6.30	f1.05	1.05	11.09
Corozal	8.54	12.36	6.34	f1.10	1.10	11.14
Balboa Heights	9.00	12.45	6.40	1.15	1.15	11 20
Panama	9.05	12.50	6.45	1.20	1.20	11.25
Arrive	A. M.	P. M.	P. M.	A. M.	A M.	P M.
	3	5	7	101	9	11

MAIN LINE STATIONS.	DAILY.			Sat'day only.	Sunday only.
	4	6	8	10	12
Leave	A M.	A. M.	P. M	P. M.	P. M.
Panama	7.10	11.00	5.00	11.30	9.35
Balboa Heights	7.15	11 05	5.05	11.35	9.40
Corozal	7.21	11.12	5.10	11.41	9.45
Miraflores Locks	7.25	11.17	5.15	11.45	9.51
Red Tank	7.30	.....	5.19	11.49	9.54
Pedro Miguel	7.34	11.23	5.23	11.53	9.58
				A. M.	
Summit	7.43	11.35	5.35	12.05	10.10
Gamboa	7.58	11 47	5.47	12.17	10 22
Darien	8.07	11.57	5.57	12.28	10.32
		P. M.			
Frijoles	8.14	12.04	6.04	12.35	10.39
Monte Lirio	8.25	12 15	6.15	12 46	10.50
Gatun	8.40	12.30	6.30	1.01	11.05
New Gatun	.....	.....	.....	.....	.....
Mount Hope	8.50	12.40	6.40	1.10	11.15
Colon	8.55	12.45	6.45	1 15	11.20
Arrive	A M.	P. M.	P. M.	A. M.	P. M.
	4	6	8	10	12

All trains stop where time is shown except f indicates stop on signal only.

		Sund'y only.	Daily except Sat'y	DAILY.				
		43	41	39	37	35	33	31
.....	.....	A. M.	P. M.	P. M.	P. M.	P. M.	A. M.	A. M.
.....	.....	12.30	11.30	7.00	4.55	1.35	9.25	6.45
.....	.....	12.35	11.35	7.05	5.00	1.40	9.30	6.55
.....	.....	12.45	11.47	7.18	5.13	1.53	9.43	7.07
.....	.....	12.50	11.50	7.21	5.16	1.56	9.46	7.11
.....	.....	.....	11.53	7.24	5.19	1.59	9.49	7.14
.....	.....	s12.55	f11.57	7.28	5.23	2.03	9.53	7.19
			A. M.					
.....	.....	1.00	f12.01	7.33	5.28	2.08	9.58	7.21
.....	.....	1.05	12.05	7.40	5.35	2.15	10.05	7.30
.....	.....	1.10	12.15	7.45	5.40	2.20	10.10	7.35
.....	.....	A.M.	A.M.	P. M.	P. M.	P. M.	A. M.	A. M
		43	41	39	37	35	33	31

LAS CASCADAS BRANCH STATIONS.	DAILY.					Daily except Sat'y.	Sat'y. only.		
	30	32	34	36	38	40	42		
Leave / Arrive	A M.	A. M.	P. M.	P. M.	P. M.	P. M.	A. M.	.....	.....
Empire	6 25	9.10	12 55	4.00	6.50	11.23	12.23	.....	.....
Culebra	6 15	9.05	12 50	3.55	6.45	11.19	12 20	.....	.....
Paraiso	6 00	8.51	12.35	3.41	6.31	11.06	12.07	.....	.....
Pedro Miguel	5.56	8.48	12 32	3.38	6.23	11.03	12 04	.....	.....
Red Tank	.....	8.45	12.29	3.35	6.25	11.00	12.01	.....	.....
							A.M.		
Miraflores Locks	5.49	8.41	12.25	3.31	6 21	10.56	11.56	.....	.....
Corozal	5 44	8.36	12 21	3.23	6.16	10.51	11.51	.....	.....
Balboa Heights	5 35	8.30	12 15	3.20	6.10	10.45	11 45	.....	.....
Panama	5.30	8 25	12 10	3. 5	6.05	10 40	11.40	.....	.....
Arrive / Leave	A.M.	A M.	P. M.	P. M.	P. M.	P. M.	P.M	.....	.....
	30	32	34	36	38	40	42		

THE PANAMA CANAL RECORD

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Records of the Coaling Plant at Cristobal in Bunkering Ships.

The coaling plant at Cristobal established a new record for quick delivery of coal on November 25, in delivering 1,101 tons 2,060 pounds of coal to the steamship *Wiltshire* in 1 hour and 35 minutes. This excels any previous record at the plant for such a quantity of bunkers. The time stated is for the period from the starting of the reloading machinery until the completion of delivery, with the coal trimmed in the bunkers. It is believed that this plant can deliver coal into bunkers faster than any other plant in the world. This delivery was at the rate of 696 tons an hour, 11.6 tons a minute, or a ton in slightly over 5 seconds. The quantity delivered amounted to 2,468,300 pounds—25,982 pounds per minute, 433 pounds a second.

The largest quantity of coal ever delivered to one ship at one time at the Cristobal plant was 5,338 tons, to the transport *Mount Vernon*, requiring 3 days, under adverse conditions. The next largest was 3,102 tons 1,000 pounds, bunkered into the steamship *Armagh* on December 16, 1919. The time required was 18 hours and 40 minutes. The delivery was at the rate of 166.3 tons per hour for the period.

The quickest delivery of record at the plant is the bunkering of a ship in 3 minutes. This was on October 26, 1916, when 50 tons 440 pounds were delivered to the *Alfred Noble* in 3 minutes. Shortly before that, the *Takushima Maru* received her bunkers of 106 tons 20 pounds in 5 minutes. For a ship to receive her bunkers and be on her way in less than half an hour is not an infrequent performance, as will be seen from the tabulated statement below.

This statement shows the record deliveries by periods of time, from 3 minutes up to the maximum time required to bunker any of the ships that have been supplied:

Time.		Amount.		Name of ship.	Date.
Hours.	Minutes.	Tons.	Pounds.		
.....	3	50	440	Alfred Noble	October 26, 1916.
.....	[1]5	106	20	Takushima Maru	October 14, 1916.
.....	9	121	1,860	Indian	January 27, 1917.
.....	10	155	660	Batford	January 14, 1917.
.....	[1]10	204	1,700	Elm Branch	December 9, 1916.
.....	12	156	1,080	Warkowahl	May 27, 1917.
.....	13	141	60	Farley	December 4, 1916.
.....	14	224	980	Hermion	December 2, 1916.
.....	20	279	200	Siljan	April 15, 1919.
.....	[1]23	349	1,160	Indian Transport	December 29, 1916.
.....	25	362	480	Herakles	April 30, 1918.
.....	30	403	2,160	Jessenie	October 16, 1917.
.....	[1]31	507	.....	Cumberland	December 20, 1916.
.....	45	596	1,920	Mahia	April 27, 1920.
.....	55	555	1,420	Suveric	November 20, 1918.
1	.....	604	1,080	Kent	February 18, 1919.
1	10	607	1,040	Ansaldo III	July 17, 1920.
1	20	851	1,860	Eastern City	September 16, 1917.
[1]1	35	1,101	2,060	Wiltshire	November 25, 1920.
5	.....	1,707	220	Arawa	May 22, 1920.
10	15	2,199	900	Hakushika Maru	January 18, 1920.
18	40	3,102	1,000	Armagh	December 16, 1919.
72	40	5,338	280	Mount Vernon	May 26, 1920.

[1] Considered an especially good record.

A photograph of the coaling plant at Cristobal is presented on page 253.

Chilean Squadron to Pass Through the Canal.

Advice has been received that a squadron of vessels of the Chilean Navy will reach the Canal during the latter half of the month of December, on their way from England to Chile. The vessels are the superdreadnaught *Almirante Latorre* (which served during a part of the World War as the *Canada* in the British Navy), the destroyers *Riveros*, *Williams*, and *Uribe*, the transport *Angamos*, and the tug *Sibbard*. The *Almirante Latorre* is of 28,000 tons displacement, 625 feet in length by 92 feet beam, and will be among the largest ships to have passed through the Canal.

Canal Traffic in November.

The Canal traffic for November, 1920, for commercial vessels, is shown as classified in the following tabulation:

PACIFIC TO ATLANTIC.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
West Coast of South America to East Coast of United States:							*Long tons.*
United States	12	36,813	43,803	55,607	36,817	$43,696.50	57,673
British	2	7,699	9,176	11,871	7,368	9,518.20	7,567
Spanish	2	4,280	4,929	6,534	3,991	5,350.00	9,920
Japanese	1	4,490	4,565	6,071	4,424	5,478.00	7,700
German	1	3,144	3,640	4,630	2,861	3,930.00	4,000
Danish	1	2,795	4,934	4,611	2,864	3,493.75	7,704
Chilean	1	2,754	3,442	5,961	2,981	3,442.50	2,799
Totals	20	61,975	74,489	95,285	61,306	$74,908.95	97,363
West Coast of South America to Europe:							
British	8	23,387	29,178	38,858	23,764	$29,233.75	32,208
Spanish	4	9,646	11,451	15,144	9,821	12,057.50	22,087
German	2	8,018	8,945	11,697	7,493	9,995.40	9,122
Italian	2	6,740	8,445	13,241	7,480	8,425.00	8,517
United States	1	3,834	4,825	6,415	3,918	4,792.50	7,750
French	1	3,566	4,081	5,681	3,600	4,457.50	6,750
Totals	18	55,191	66,925	91,036	56,076	$68,961.65	86,434
West Coast of United States to Europe:							
United States	8	32,591	40,896	50,401	33,474	$40,738.75	57,724
British	3	15,962	19,814	25,138	15,628	19,952.50	31,264
Danish	1	5,226	5,660	6,919	5,223	6,532.50	9,150
Dutch	1	4,860	6,068	7,651	4,796	6,075.00	8,786
Swedish	1	2,295	3,967	3,774	2,875	2,868.75	5,383
Totals	14	60,934	76,405	93,883	61,996	$76,167.50	112,307
West Coast of South America to Cristobal:							
British	6	4,120	5,964	8,203	4,566	$5,128.90	4,376
Chilean	2	3,274	5,759	6,351	3,872	4,092.50	1,527
Peruvian	2	2,472	3,934	5,171	2,683	3,071.05	5,318
United States	1	336	350	615	372	420.00	646
Totals	11	10,202	16,007	20,340	11,493	$12,712.45	11,867
United States coastwise:							
United States	10	29,891	38,708	47,973	29,692	$36,173.40	41,269
Far East to East Coast of United States:							
British	3	11,191	12,837	14,300	9,637	$13,104.25	14,403
United States	2	8,696	9,756	12,927	8,029	10,870.00	11,948
Japanese	2	6,935	8,299	10,951	6,554	8,668.75	11,513
Totals	7	26,822	30,892	38,178	24,220	$32,643.00	37,864
West Coast of South America to Mexico:							
United States	5	22,371	25,477	33,199	21,666	$18,531.54	Ballast.
British	1	4,677	5,342	7,270	4,513	3,846.24	Ballast.
Norwegian	1	4,424	5,108	6,962	4,418	3,677.76	Ballast.
Totals	7	31,472	35,927	47,431	30,597	$26,055.54	Ballast.
Australasia to Europe:							
British	6	43,130	52,507	63,654	41,795	$53,714.10	38,391
West Coast of United States to Mexico:							
United States	2	8,548	9,878	13,732	8,547	$7,112.16	Ballast.
British	1	2,879	3,261	4,722	2,897	2,347.92	Ballast.
Totals	3	11,427	13,139	18,454	11,444	$9,460.08	Ballast.
West Coast of Canada to Europe:							
British	3	10,148	13,864	16,023	10,003	$12,685.00	20,474

PACIFIC TO ATLANTIC—Continued.

Route and registry.	No. of vessels.	United States equivalent	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
West Coast of United States to Cristobal:							*Long tons.*
United States	3	4,818	5,654	7,693	4,791	$6,022.50	1,137
West Coast of Central America to Cristobal:							
British	2	1,288	1,398	2,298	1,304	$1,610.00	357
United States	1	767	742	1,088	767	958.75	707
Totals	3	2,055	2,140	3,386	2,071	$2,568.75	1,064
Australasia to East Coast of United States:							
British	2	12,983	14,744	20,171	13,044	$16,228.75	10,473
Between United States coastwise ports:[1]							
British	1	5,088	6,151	8,082	5,090	$6,360.00	9,954
Norwegian	1	2,988	3,374	4,747	2,963	3,735.00	6,100
Totals	2	8,076	9,525	12,829	8,053	$10,095.00	16,054
West Coast of United States to East Coast of South America:							
United States	1	2,978	4,034	4,839	2,978	$3,722.50	5,610
West Coast of South America to Azore Islands:[1]							
Spanish	1	1,961	2,333	3,067	1,856	$2,451.25	4,413
West Coast of United States to Cuba:							
United States	1	1,934	2,187	3,125	1,934	$2,417.50	3,732
Philippine Islands to East Coast of United States:							
United States	1	1,800	1,795	2,296	1,673	$2,164.00	2,800
West Coast of United States to West Indies:[2]							
United States	1	609	635	1,185	604	$761.25	2,549
Local—Canal Zone ports:							
Panama	1	14	14	17	14	$10.50	.....
Grand totals	115	378,420	461,924	590,865	375,640	$449,913.67	493,801
Totals last month	119	380,566	465,043	591,016	372,914	$447,909.05	502,353

[1] For orders. [2] Exclusive of Cuba and Porto Rico.

ATLANTIC TO PACIFIC.

East Coast of United States to West Coast of South America:							
United States	13	36,679	43,958	57,270	37,110	$42,469.68	43,711
Danish	4	8,720	9,926	11,671	7,065	10,529.85	16,347
Norwegian	3	15,453	17,031	21,262	13,890	19,094.20	27,881
British	3	6,106	7,649	9,464	5,691	7,632.50	9,097
Spanish	1	1,858	2,121	3,071	1,845	2,322.50	4,443
Totals	24	68,816	80,685	102,738	65,601	$82,048.73	101,479
United States coastwise:							
United States	19	58,603	69,247	88,837	58,143	$72,599.45	51,454
East Coast of United States to Australasia:							
British	9	44,712	52,535	66,044	43,172	$55,570.50	70,697
United States	2	8,255	9,738	12,112	8,206	10,318.75	13,320
Norwegian	2	6,919	6,998	8,764	5,525	8,397.60	11,400
Swedish	1	2,622	4,035	4,315	3,329	3,277.50	6,007
Totals	14	62,508	73,306	91,235	60,232	$77,564.35	101,424
Europe to West Coast of South America:							
British	6	[1]14,985	[1]19,908	[1]24,249	[1]14,784	$21,628.25	22,709
Italian	2	5,981	7,882	10,603	6,406	7,476.25	2,359
French	1	4,326	4,363	5,923	3,763	5,235.60	964
Peruvian	1	3,510	3,544	4,763	3,089	4,252.80	4,762
Swedish	1	3,123	4,013	4,952	3,973	3,903.75	1,758
Danish	1	2,202	3,209	3,453	2,227	2,752.50	4,000
Spanish	1	2,160	2,581	3,458	2,159	1,858.32	.....
Totals	13	36,287	45,500	57,401	36,401	$47,107.47	36,552
Cristobal to West Coast of South America:							
United States	4	1,499	1,511	2,429	1,611	$1,490.25	490
British	3	2,066	2,529	3,627	2,107	2,573.40	1,276
Chilean	2	3,608	6,250	7,612	4,560	4,510.00	736
Peruvian	2	2,495	5,356	8,049	4,187	3,118.75	2,027
Totals	11	9,668	15,646	21,717	12,465	$11,692.40	4,529

[1] British cruiser of 5,794 displacement tonnage not included.

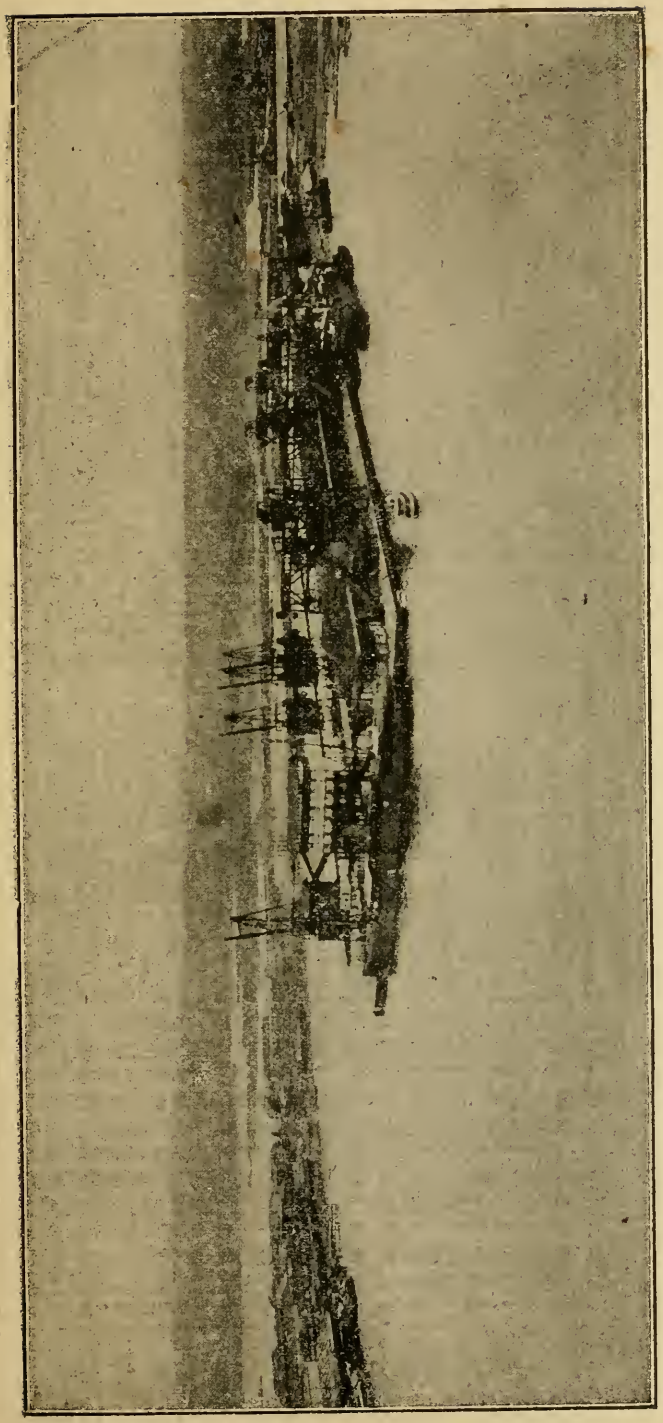
ATLANTIC TO PACIFIC.—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
East Coast of United States to Far East:							*Long tons.*
Japanese	3	13,750	15,206	20,781	13,460	$17,034.70	19,363
United States	3	11,702	14,332	18,946	11,721	14,627.50	21,533
British	2	8,618	9,020	9,604	6,091	10,670.35	10,914
Total	8	34,070	38,558	49,331	31,272	$42,332.55	51,810
East Coast of Mexico to West Coast of South America:							
United States	4	17,348	21,862	27,099	16,777	$21,685.09	34,900
Norwegian	1	4,447	5,076	6,987	4,422	5,558.75	9,300
British	1	4,325	4,963	6,533	4,178	5,406.25	9,000
Totals	6	26,120	31,901	40,619	25,377	$32,650.00	53,200
Europe to West Coast of United States:							
British	2	7,289	9,792	11,454	7,180	$7,050.24	Ballast.
United States	2	7,263	9,648	11,663	7,263	6,946.56	Ballast.
Dutch	1	6,852	6,961	9,065	6,871	8,353.20	2,500
Totals	5	21,404	26,401	32,182	21,314	$22,350.00	2,500
Europe to Australasia:							
British	3	16,784	22,277	26,625	16,948	$20,980.09	27,244
Mexico to West Coast of United States:							
United States	2	9,885	11,449	15,470	9,573	$12,356.25	20,000
East Coast of United States to West Coast of Canada:							
British	1	4,889	7,133	7,548	4,848	$6,111.25	10,000
United States	1	3,822	5,256	6,188	3,822	4,777.50	8,890
Totals	2	8,711	12,389	13,736	8,670	$10,888.75	18,890
Foreign ships in ballast between United States coastwise ports:							
Danish	1	2,967	3,839	4,751	2,965	$3,708.75	Ballast.
British	1	1,865	2,169	3,096	1,860	2,331.25	Ballast.
Totals	2	4,832	6,008	7,847	4,825	$6,040.00	Ballast.
Cristobal to West Coast of United States:							
United States	2	3,486	4,061	5,540	3,482	$4,357.50	4,394
West Indies to West Coast of South America:[1]							
United States	1	2,355	2,318	3,102	2,423	$1,766.25	Ballast.
British	1	(2)	(2)	(2)	(2)	3,227.50	Ballast.
Totals	2	2,355	2,318	3,102	2,423	$4,993.75	Ballast.
Porto Rico to West Coast of South America:							
Spanish	1	(3)	(3)	(3)	(3)	$7,500.00	Ballast.
East Coast of Canada to Australasia:							
British	1	5,247	5,296	6,975	5,299	$6,355.20	3,795
Europe to Far East:							
British	1	4,416	4,873	7,011	4,462	$5,557.50	6,800
Africa to West Coast of United States:							
United States	1	4,157	5,707	6,691	4,157	$4,100 04	Ballast.
Europe to West Coast of Canada:							
British	1	3,231	4,008	5,241	3,220	$4,038.75	368
East Coast of South America to West Coast of United States:							
United States	1	3,034	4,174	4,748	2,925	$3,792.50	1,435
Europe to Central America:							
British	1	1,622	1,797	2,737	1,683	$2,027.50	1,538
East Coast of United States to East Coast of South America:							
United States	1	1,467	1,641	2,372	1,447	$1,833.75	2,700
Cristobal to West Coast of Central America:							
British	1	650	692	1,128	659	$812.50	997
Local—Between Canal Zone ports:							
Panaman	1	14	14	14	14	$10.50	Ballast.
Grand totals	123	387,397	467,951	593,207	380,583	$483,998.44	491,109
Totals last month	119	381,447	470,536	599,920	381,626	$463,916.53	488,713

[1] Exclusive of Cuba and Porto Rico.

[2] Spanish battleship; displacement tonnage, 15,000.

[3] British cruiser; displacement tonnage, 6,455.



GENERAL VIEW OF THE CANAL COALING PLANT AT CRISTOBAL, AS APPROACHED FROM THE CANAL. This plant has a normal storage capacity of 350,000 tons, and is believed to be capable of bunkering ships more rapidly than any other plant in the world. A review of some of its records is published on page 249.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight December 11, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Tatsuno Maru	4	22.55	5	6.25	5	13.57	5	15.00	Japanese	Nippon Yusen Kabushiki Kaisha	450.0	58.0	25.0	New York	Manila	Lubricating oil	7,156	7,719	5,415
Gen. O. H. Ernst	5	5.55	5	7.05	5	15.40	8	10.48	American	Panama Railroad Steamship Line	356.4	45.0	24.8	New York	Balboa	Coal	3,644	4,503	2,764
Jason	3	7.10	5	8.17	5	15.44	5	20.47	Dutch	Royal Netherlands W. I. Mail	345.0	48.0	19.7	Rotterdam	Valparaiso	General	3,600	4,321	3,120
Pulaski	4	9.13	5	12.00	5	18.07	5	19.05	American	Caribbean S. S. Co (S. B.)	251.0	43.6	14.5	New York	Guayaquil	General	720	2,823	1,744
Indian City	5	8.51	5	12.00	5	19.16	5	20.10	British	W. R. Smith & Sons	411.7	54.5	15.0	Rotterdam	San Francisco	Ballast		6,512	4,665
Borneo Maru	5	15.15	6	6.25	6	15.00	6	16.05	Japanese	Osaka Shosen Kaisha	365.0	51.0	22.0	Galveston	Yokohama	General	3,424	5,919	4,409
Cleveland[1]	6	3.05	6	6.30	6	14.05			American	United States Navy	320.0	40.0	17.0	Puerto Cabello	Balboa				
Ethelstan	6	7.00	6	7.35	6	17.40	6	18.50	British	Rhondda Merthyn & Co	349.0	47.0	23.6	Baltimore	Valparaiso	Coal	5,115	4,310	3,217
Pacific	6	6.50	6	12.00	6	20.26	6	21.45	Norwegian	Vilhelm Torkildsen	399.7	56.0	26.8	Norfolk	Mejillones	Coal	7,816	6,479	4,709
Orient	6	16.50	7	6.35	7	14.04	8	19.18	American	Oriental Navigation Co	376.4	52.3	25.0	Norfolk	Valparaiso	Coal	5,728	5,455	3,879
Annam[2]	7	9.05	7	12.35	7	19.10	8	1.90	Danish	East Asiatic Steamship Co	410.0	55.0	17.6	Copenhagen	San Francisco	General	3,476	7,067	5,318
Gen. W. C. Gorgas	3	21.25	7	13.35	7	20.22	7	21.18	American	Panama Railroad Steamship Line	370.0	45.3	23.0	New York	Guayaquil	General	650	5,191	3,336
Rio Gatun[3]					7	19.15			Panaman	A. R. Eckhardt				Monte Lirio	Balboa			8	8
Sorata	7	16.40	8	6.23	8	15.50	8	20.57	British	Pacific Steam Navigation Co	390.0	47.3	21.0	Hull	Coronel	General	3,078	4,782	3,336
Edward Pierce	7	13.40	8	6.32	8	16.30	8	17.35	American	Crowell & Thurlow S. S. Co	375.0	49.0	24.0	Norfolk	Arica	Coal	5,375	4,591	3,261
Santa Ana	7	21.30	8	6.52	8	15.45	8	16.28	American	W. R. Grace & Co	360.2	51.6	23.2	New York	Valparaiso	General	2,211	5,842	4,150
Cambrian[4]	7	7.20	8	8.14	8	17.15	8	21.23	British	British Government	446.0	41.0	16.1	Port Limon	Balboa				
Cauca	1	22.23	8	9.50	8	20.00	8	21.04	British	Pacific Steam Navigation Co	246.0	35.0	15.0	Cristobal	Guayaquil	General	163	1,582	1,023
Renaico	7	6.32	8	10.12	8	20.16	8	21.15	Chilean	South American Steamship Line	412.0	50.5	27.5	New York	Talcahuano	General	2,300	6,050	3,442
R-24[4]			8	7.20	8	18.15			American	United States Navy				Cristobal	Balboa				
Caddo	9	6.45	9	7.25	9	15.29	9	19.26	American	Standard Oil Co	414.0	55.0	28.0	Port Lobos	Pisagua	Oil, crude	8,150	6,438	4,391
Karen Roganes	9	6.32	9	11.55	9	20.04	9	21.15	Norwegian	Rogenes & Co	293.0	44.0	18.6	Baltimore	Callao	Coal and coke	3,146	2,666	1,643
Lancaster	9	20.25	10	6.30	10	14.48	10	15.55	American	Green Star Steamship Corp	434.3	57.7	29.0	Baltimore	Japan	General	10,000		
Eurydamas	9	22.05	10	6.48	10	15.58	10	17.00	British	Blue Funnel Line	410.0	50.0	17.0	Glasgow	San Francisco	General	950	5,718	4,189
Pomona	10	1.40	10	6.52	10	16.45	11	15.24	American	United States Shipping Board	440.0	56.0	17.0	London	San Pedro	General	1,410	8,300	6,026
Stanley	10	6.35	10	7.35	10	17.39	11	7.27	American	Barber Steamship Co. (S. B.)	401.7	54.8	26.11	Norfolk	Cavite	Coal and coke	8,395	6,933	5,187
Salvador	4	14.00	10	7.55	10	17.36	10	18.58	British	Pacific Steam Navigation Co	215.0	33.5	15.6	Cristobal	Champerico	General	974	1,213	692
Mantaro	3	15.25	10	11.15	10	19.25	11	1.00	Peruvian	Peruvian Line	367.3	48.0	19.8	Cristobal	Callao	General	813	4,838	2,959
Trevalgan	10	12.50	10	13.25	10	21.53	10	22.45	British	Ed. Hain & Son	362.0	51.0	22.0	Montreal	Auckland	General	7,583		
Stephen R. Jones	10	6.05	10	13.30	10	21.30	10	23.30	American	Crowell & Thurlow S. S. Co	354.0	49.0	26.0	Norfolk	Valparaiso	Coal	5,697	4,627	3,277
Ballena	10	12.24	11	6.09	11	14.53	11	15.55	British	Pacific Steam Navigation Co	412.0	52.0	21.0	Hull	Coronel	General	3,269	5,816	4,113
Lewis K. Thurlow	10	14.08	11	6.17	11	13.53	11	15.00	American	Crowell & Thurlow S. S. Co	313.5	46.1	22.11	Philadelphia	Valparaiso	Coal	4,002	3,441	2,444

[1] Cruiser. [2] Motor ship. [3] Launch. [4] Submarine.

Cathlamet	10	19.50	11	6.25	11	16.12	11	22.30	American	U. S. and Australian Line	410.6	54.0	25.3	New York	Auckland	Case oil, general	6,545	6,755	4,883
Sylvan Arrow	10	17.35	11	6.27	11	17.48	11	18.47	American	Standard Oil Co	467.6	62.7	26.6	Beaumont	Orient ports	Oil	11,512	9,931	7,095
Lompoc	10	17.45	11	6.30	11	16.51	11	23.45	British	C. T. Bowring & Co	435.3	55.8	27.0	Tampico	Antofagasta	Fuel oil	9,500	7,488	5,342
Mexican	11	6.22	11	8.34	11	19.26	11	20.35	American	American-Hawaiian Line	472.0	57.0	22.0	New York	Los Angeles	General	4,286	9,184	6,821
Sagama River	11	8.30	11	9.35	11	20.50	11	22.02	British	Houlder Brothers	385.0	52.0	17.0	Norfolk	Callao	Ballast		5,237	3,837
Finchley	11	7,03	11	9.55	11	20.46	11	21.50	British	Watts, Watts & Co	330.0	43.0	22.6	Norfolk	Iquique	Briquettes	4,016	3,453	2,422
Ascutney	11	8.33	11	10.46	11	21.40	12	7.48	American	Atlantic Adriatic Corp. (S. B.)	389.0	46.0	26.0	Baltimore	Valparaiso	Coal	5,842		
Paparoa	11	6.15	11	12.48	11	22.40	11	23.45	British	New Zealand Shipping Co	430.0	54.0	24.0	London	Wellington	General	3,118	8,174	6,092
City of Sherman	11	12.33	11	13.00	11	23.30	11	12.30	American	Hasler & Co. (S. B.)	401.0	54.0	26.0	Norfolk	Iquique	Coal	7,723	6,530	4,708

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Honolulu Maru	4	21.55	5	7.54	5	15.30	5	18.25	Japanese	Osaka Shosen Kaisha	407.2	50.8	24.0	Manila	New York	Sugar and general	6,422		
Gen. H. F. Hodges	9-16	14.10	5	11.05	5	17.58			American	Panama Railroad Steamship Line	323.5	39.0		Balboa	Cristobal				
Franklin K. Lane	5	22.35	6	8.00	6	14.40	6	14.45	American	Panama Pet. and Transp. Co	436.0	56.0	19.8	San Francisco	Tampico	Ballast			
Sebara[5]					6	13.50	8	10.50											
Ancon	6	10.30	6	12.20	6	20.05	7	1.15	American	United States Government	489.5	58.0	30.0	Antofagasta	New Orleans	Nitrates	11,000	10,157	7,689
Lehigh	5	8.50	7	13.50	7	20.50	7	20.50	American	N. Atl. & West'n S. S. Co. (S. B.)	390.0	54.2	24.0	San Francisco	Boston	Lumber, general	4,838	6,106	4,346
Derbyline	5	8.15	7	14.44	7	21.50	7	21.50	American	Struthers & Dixon (S. B.)	435.0	56.0		San Pedro	Tecomate	Ballast			
Knut Hamsun	7	15.30	8	6.33	8	14.35	8	16.55	Norwegian	Olaf Orvig	310.0	44.0	17.5	Callao	New York	(6)	3,196	2,972	2,086
Pleiades	7	22.40	8	7.36	8	14.49	8	20.47	American	Luckenbach Line	331.5	47.0	21.0	San Francisco	New York	General	4,000	4,147	3,259
Standard Arrow	7	20.30	8	7.52	8	15.30	8	15.50	American	Standard Transportation Co	467.6	62.7	20.0	San Francisco	Beaumont	Ballast		9,931	7,019
Santa Luisa	8	4.30	8	8.32	8	16.15	8	16.28	American	W. R. Grace & Co	360.2	51.6	24.2	Valparaiso	New York	General	4,200	5,694	3,975
Balboa	8	6.33	8	9.36	8	16.50			American	Colombian Maritime Co	190.0	29.1	13.6	Buenaventura	Cristobal	General	486	741	350
Port Curtis	8	12.10	8	9.45	8	18.25	8	19.55	British	Commonwealth and Dom. Line	450.4	58.4	24.0	Sydney	London	Frozen, general	6,200	6,031	
Bradford	7	16.45	8	13.54	8	21.32	9	14.05	American	Standard Oil Co	426.9	54.6	20.0	San Francisco	Tampico	Ballast		7,318	5,458
National Bridge	8	13.15	8	14.50	8	23.08	9	2.47	American	Wessel Duval (S. B.)	324.0	46.2	23.2	Antofagasta	Wilmington	Nitrates	4,770	3,959	2,649
Huanchaco	8	14.10	9	6.33	9	14.30	9	17.35	British	Pacific Steam Navigation Co	390.6	50.2	24.6	Port Stanley	Liverpool	(7)	5,439		
Newport	8	8.40	9	6.55	9	16.03			American	Pacific Mail Steamship Co	326.0	38.0	14.0	San Francisco	Cristobal	General	43	3,173	2,163
San Joaquin	5	20.00	9	6.38	9	15.20	9	15.20	Norwegian	W. Wilhelmsens	425.4	57.1	19.0	Tocopilla	Tampico	Ballast		7,059	5,075
Rio Gatun[3]	7		9	7.30					Panaman	A. R. Eckhardt	31.4	8.0		Balboa	Gatun Lake				
Cordelia	9	7.10	9	9.10	9	16.25	9	21.55	British	C. T. Bowring	420.3	54.6	19.6	Antofagasta	Tampico	Ballast		6,690	4,963
Corinthic	9	15.20	10	6.32	10	13.52	10	13.52	British	White Star Line	500.0	63.0	26.3	Auckland	London	General	4,955	12,792	9,506
Fargo	9	15.00	10	6.39	10	17.02	10	17.02	American	Paragon Shipping Co. (S. B.)	251.0	43.5	25.0	Valparaiso	New York	Nitrate of soda	3,210	2,857	1,783
Quillota	10	5.15	10	8.48	10	17.20	11	13.06	British	Pacific Steam Navigation Co	361.4	46.2	16.1	Guayaquil	New York	General	561	4,768	2,987
Pionier	9	23.30	10	8.49	10	18.15	11	10.25	Belgian	Lloyd Royal Belge	400.0	52.2	25.0	Iquique	Antwerp	Nitrates	7,000		
Elkton	10	7.10	10	9.29	10	18.34	10	21.20	American	Pacific Steamship Co. (S. B.)	402.6	54.8	28.0	Tacoma	Dublin	Wheat	7,169		
Helder	10	12.45	10	13.51	10	22.50	11	15.27	Dutch	Royal Netherland Steamship Co.	361.4	49.8	21.6	Taltal	Bilbao	Nitrates	5,316		
Haleakala	9	12.40	10	14.28	10	22.10	10	22.10	American	Sudden & Christensen (S. B.)	410.5	54.3	23.6	Portland	W. Hartlepool	Lumber	7,842		
Myrmidon	11	12.30	11	13.25	11	22.05	12	6.34	British	Alfred Holt & Co	391.5	49.2	25.0	San Francisco	Liverpool	(8)	5,589		

[5] Reported in last week's issue. [6] Sugar, cotton, and minerals. [7] Copper, nitrate, etc. [8] Salmon, wheat, and lumber.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

(Continued on page 260, column 2.)

Night Quarantine Service.

THE PANAMA CANAL, BALBOA HEIGHTS, C. Z., December 6, 1920.

CIRCULAR No. 626-7:

By virtue of the authority contained in Executive Order of March 31, 1920, published as Panama Canal Circular No. 601-110, Sections (*a*) and (*b*), paragraph 33 of Panama Canal Circular No. 626-6, General Quarantine Instructions, are hereby amended to read as follows:

(*a*) Vessels from ports not subject to a yellow fever quarantine, passing breakwater at Cristobal harbor before 10 p. m., will be boarded and inspected by the quarantine officer, unless such inspection is definitely refused by the agent prior to the arrival of the vessel.

(*b*) Vessels from ports not subject to yellow fever quarantine, arriving at Balboa, on a line between San Jose Rock and No. 2 Buoy before 10 p. m., will be boarded and inspected by the quarantine officer, unless such inspection is definitely refused by the agent prior to the arrival of the vessel.

JAY J. MORROW,
Acting Governor.

Canal Mattress Factory Can Do Upholstery, Mattress, Canvas, and Drapery Work for Steamships.

Attention of steamship interests is invited to the fact that The Panama Canal operates a mattress factory, which is able to handle all classes of upholstery, mattresses, canvas work, and draperies.

The factory can make 50 mattresses a day. Work of this class can be done while a ship is tied up for repairs or for any other reason spending time in the terminal ports, and the service is available alike to vessels at either end of the Canal. Vessels coming to the Canal or its terminal ports which require work of this kind would do well to advise their requirements by wireless, as much in advance of arrival as practicable, but on short notice the quickest possible service will be given.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended December 11:

Barge *No. 131*, general repairs; steamship *Marne*, general repairs and rebuilding; dredge *No. 83*, general repairs; launch *Captain Wilhelm*, hull repairs and installation of new engine; steamship *Hodges*, general repairs; tug *Bohio*, general repairs and rebuilding; launch *Limon*, general overhauling; steamship *Olockson*, pumping out and trimming ship; launches *Pilot*, repairs to hull; *Santa Rita*, rebuilding; barges *Nos. 134* and *35*, general overhauling; submarine *R–24*, periodical overhaul; steamship *San Joaquin*, miscellaneous minor repairs; U. S. S. *Ballard*, minor miscellaneous repairs, steamships *General Ernst*, engineer, deck, and steward's departments repairs; *Lehigh*, renew one boiler tube; *Glenpool*, miscellaneous minor repairs to machinery; *Haleakala*, manufacture 4 H. P. piston rings.

The following vessels were at the Cristobal shops for repairs during the week ended December 13:

Steamships *Colon*, *Ulysses*, barge *Mamei*, miscellaneous repairs and painting to engine, deck, and steward departments; tug *St. Anne*, repair boiler, steering engine chains, feeders, etc.; U. S. S. *Whippoorwill*, test and repair condenser, test evaporator, true H. P. piston rod, etc.; steamship *Balboa*, clean and paint hull, general overhaul; U. S. A. T. *Logan*, install armature and bearing, etc.; steamship *Newport*, repair winches, fire and sanitary pumps, etc.; U. S. S. *Forse*, clean and paint, repair rudder, sheathing, etc.; U. S. S. Eagle *No. 4*, clean and paint, repair hull and wrap shaft; steamships *Bradford*, repair H. P. slipper and guide; *Sebara*, *General H. F. Hodges*, *Toloa*, *Sorata*, *Metapan*, tug *Porto Bello*, steamships *Haiti*, *Tamar*, *Parismina*, U. S. D. B. *L–53*, steamship *Caddo*, U. S. S. *Poe*, and steamship *Caribbean*, minor repairs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending December 11, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Essequibo	Pacific Steam Navigation Co		December 5		1,325
Ulua	United Fruit Co	December 5	December 5	64	2
Caribbean	Panama Railroad Cattle Industry		December 5		15
Gen. W. C. Gorgas	Panama Railroad Steamship Line		December 7		95½
Heredia	United Fruit Co	December 6	December 9	1,073	262
Panama	Panama Railroad Steamship Line	December 6	December 9	12	2,379
Annam	East Asiatic Co	December 7	December 7	11	(4)
Tolon	United Fruit Co	December 7	December 8	462	37
Sorata	Pacific Steam Navigation Co	December 7	December 8	11	130
Renaico	Chilean Line	December 7	December 8	(2)	98
Louisiana	Texas Oil Co	December 7	December 8	4,209	(4)
Cauca	Pacific Steam Navigation Co		December 8		283
Haiti	French Line	December 7	December 10	228	189
Balboa	Colombian Maritime Co	December 8		436	
Metapan	United Fruit Co	December 8	December 8	(3)	4
Carrillo	United Fruit Co	December 8	December 9	249	316
Mantaro	Peruvian Line		December 10		913
Salvador	Pacific Steam Navigation Co		December 10		928
Caribbean	Panama Railroad Cattle Industry	December 9		205	
Ulysses	Panama Railroad Steamship Line	December 9		12,004½	
[1]Mamei	Panama Railroad Steamship Line	December 9		7,495	
Newport	Pacific Mail Steamship Co	December 9		43	
Ballena	Pacific Steam Navigation Co	December 10	December 11	7	64
Quillota	Pacific Steam Navigation Co	December 10	December 11	181	228
Colon	Panama Railroad Steamship Line	December 10		3,020	
Tamar	Pacific Steam Navigation Co	December 11		440	
Duendes	Pacific Steam Navigation Co	December 11		38	

[1] Barge. [2] No cargo discharged. [3] 500 pounds. [4] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending December 12, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Derbyline	Arrow Oil Co	December 5	December 7	7,800	
Lehigh	North Atl. and Western S. S. Co	December 5	December 7	291	
Buenos Aires	Johnson Steamship Line	December 6	December 8	290	
Balboa	Colombian Maritime Co	December 8	December 8	2	
Newport	Pacific Mail Steamship Co	December 8	December 8	81	65
Gen. O. H. Ernst	Panama Railroad Steamship Line	December 6	December 8	2,644	
Quillota	Royal Mail Steam Packet Co	December 10	December 10	1	
Mantaro	Peruvian Line	December 10	December 10		60
Ballena	Pacific Steam Navigation Co	December 11	December 11		45
Alvarado	Swayne & Hoyte, Inc	December 12	December 13	14	

Lumber Shipments from Seattle.

A press letter issued by the Seattle Chamber of Commerce in November states:

"An outstanding trade feature of Pacific Northwest lumber is the increase in shipments by water to Atlantic Coast ports. Since the increase in transcontinental rail freight rates, Oregon and Washington mills have shipped 4,000,000 feet of lumber through the Panama Canal to Baltimore, Philadelphia, New York, and Boston. In 3 months this water movement has equaled the Pacific-Atlantic coast lumber shipments for 1919."

Use of New Cable from Colon to Cartagena.

The All-America Cables, Inc., placed the cable line from Colon to Cartagena, Colombia, in service on October 18, the rates are 30 cents per word for Cartagena plus 15 cents per word for interior points which is the same as the rate to Buenaventura over the Pacific Cable.

An adjustment of rates is now being arranged which is expected to reduce them by 50 per cent.

The new cable is handling messages to Cartagena, Barranquilla, and a few interior points in the vicinity, and later will handle mes-

sages for Bogota, which now go by way of Buenaventura. The Cartagena cable was completed in August, but pending the adjustment of points in the contract with the Government of Colombia it was not opened to service. Arrangements are being made to extend the cable to Barranquilla, which is now reached by overland telegraph from Cartagena.

Weather Conditions in November, 1920.

The rainfall for the month was generally below normal everywhere except over the Pacific section where it was considerably above the average, the rainfall at Balboa and Balboa Heights being the highest on record at these stations for the month of November. This excess was due mainly to the heavy rain on the Pacific side on the 28th. Totals ranged from 5.47 inches at the station at the Rio Boqueron to 21.27 inches at Colon (extreme outlying stations in Panama not included). The greatest amount of rainfall recorded on any one day was 6.11 inches at Porto Bello on the 7th.

The estimated November rainfall over the Gatun Lake watershed was 11.16 inches, compared with a 10-year mean of 14.59 inches. Over the Chagres River watershed above Alhajuela it was 12.39 inches, compared with a 19-year mean of 18.09 inches.

The air temperature, daytime cloudiness, and sea temperature were above the normal, while the relative humidity and evaporation were below normal. The atmospheric pressure and wind movement were approximately normal.

A number of light and dense fogs were observed at interior stations, all of which lifted or were dissipated by 8.30 a. m.

A slight seismic tremor was recorded on the 12th:

Gatun Lake hydrology—Mean elevation of Gatun Lake was 86.58 feet; maximum 86.79 feet on the 28th; minimum, 86.46 feet on the 5th; evaporation from Gatun Lake surface, 3.315 inches; rainfall on Gatun Lake drainage basin, 9.17 inches; total yield of Gatun Lake watershed 11.16 inches on the watershed. The total yield amounted to 84 per cent of the rainfall.

Climatological conditions at the representative stations are summarized in the following table:

Stations.	Pressure (reduced to mean of 24 hours).	Temperature.					Mean relative humidity.	Precipitation.			Wind.				
		Mean.	Maximum.	Date.	Minimum.	Date.		Total inches.	Station average.	Days with .01 inch or more.	Total movement (miles).	Prevailing direction.	Maximum velocity in miles.	Direction.	Date.
Balboa Heights...	29.844	79.6	92	Nov. 30	71	Nov. 18	86.4	19.22	10.48	21	4,586	N.W.	27	N. E.	Nov. 11
Colon.....	29.842	81.0	91	Nov. 10	72	Nov. 7	82.9	21.27	21.04	22	6,506	W.	28	N E.	Nov. 7
Gatun.....	.....	80.2	89	[1]Nov. 11	72	Nov. 20	....	9.78	19.03	24	4,746	N.W.	26	S. E.	Nov. 12
Gamboa.....	.....	79.1	89	[1]Nov. 4	70	[1]Nov. 16	....	13.63	11.92	24	3,155	N.E.	20	N. E.	[1]Nov. 3

[1] And other dates.

Addition to Tariff.—Rates for Recharging Fire Extinguishers.

THE PANAMA CANAL, THE PANAMA RAILROAD COMPANY,
BALBOA HEIGHTS, C. Z., December 6, 1920.

The following addition is made to Tariff No. 4, Schedule of Rates for Supplies and Services Furnished to Shipping and Allied Interests at The Panama Canal:

ITEM 38—RECHARGING FIRE EXTINGUISHERS.
(Effective January 1, 1921.)

Recharging.....each.. $0.75
Extra charges furnished.....each.. .75

Extinguishers are recharged at Balboa or Cristobal fire stations. Transportation to and from the stations to be borne by the interests concerned.

JAY J. MORROW,
Acting Governor, The Panama Canal.
Second Vice President, The Panama Railroad Co.

(NOTE.—The foregoing will be included in Supplement No. 4 to Tariff No. 4 when this supplement is issued.)

Automobile and Motorcycle License Tags.

The Chief of the Division of Civil Affairs authorizes the following:

Automobile and motorcycle license tags for 1921 may now be obtained from the Division of Civil Affairs, room 301, Administration Building, Balboa Heights. The 1921 personal and commercial tags have a drab background with black raised letters and figures—the figures "21" appearing below the letters "C. Z.," between the left end of the tag and the serial number. Personal tags begin with serial No. 001, and commercial tags with serial No. 5001. The official motor vehicle licenses in use at the present time need not be renewed.

Annual license rates for residents of the Canal Zone are as follows: Automobile for personal use, $5; automobile for hire, 29-horsepower or under, $20; automobile for hire, over 29-horsepower, $30; truck or omnibus, over 3 tons, $40; motorcycle, $2. Residents of Panama or Colon (which includes Colon Beach and New Cristobal), must first obtain licenses from their respective municipalities, and, upon the presentation of the proper receipts from the municipal authorities of Panama or Colon, will be accorded the special reciprocal rate of $1 for Canal Zone personal motor vehicle licenses, $12.50 for automobiles for hire, and $15 for trucks and omnibuses. Receipts must be presented covering the payment of fees for the current month to the municipal authorities of Panama or Colon before a reciprocal license can be renewed.

When applying for a 1921 license the applicant should be prepared to furnish the number of the 1920 Canal Zone license, or, in the case of a new car, the make of the car and its engine number, as well as the free entry request number under which the car was imported. If a license is desired in the name of a person other than the last owner of record in the license bureau, the applicant must present evidence of the transfer of ownership from the last licensee to himself. When a car which has been imported on a free entry request is transferred to a nonemployee, or is to be licensed as a commercial vehicle, the receipt for the payment of customs duties to the Republic of Panama must be presented.

If remittances are made by mail, it is requested that money be forwarded by registered letter, money order, or check. Checks or money orders should be made payable to the Collector, The Panama Canal, Balboa Heights. The post-office address of the applicant should also be given.

Price of Yellow Pine or Fir Lumber.

Under "Prices of Miscellaneous Supplies" published in THE PANAMA CANAL RECORD of December 8, 1920, "Lumber, yellow pine or fir, except ceiling" was quoted at $100 per 1,000 feet board measure. This bulletin has been corrected to quote the price of this item at $93.75 per 1,000 feet, including the surcharge of 25 per cent.

Cost of Water.

No charge is made against employees of The Panama Canal for water used, and this has led to the waste of a considerable amount of water and the more or less general impression that water costs nothing.

To correct this idea there is given below a table showing the actual cost of furnishing water at different localities on the Canal Zone:

	Per 1,000 gallons.
Cristobal	$0.05
Gatun	.13
Pedro Miguel	.06
Ancon-Balboa	.07

Every gallon of water wasted represents money wasted, and continued waste will result in curtailment of the water furnished this coming dry season.

Employees should report promptly all leaky fixtures and waste of water wherever noted, and the threatened shortage will be avoided.

Postal Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

Official Circulars.

Official Correspondence.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 10, 1920.

CIRCULAR No. 616-2:

1. All negotiations for the purchase of material or supplies for The Panama Canal will be conducted by the Supply Department on the Isthmus and by the General Purchasing Officer in the United States.

2. Individual employees are not authorized to ask for prices or proposals of any kind on behalf of The Panama Canal or to hold out to manufacturers or contractors an expectation that contracts with The Panama Canal may follow their inquiries. The Chief Quartermaster, Balboa Heights, should be called on in case information, prices, or proposals are required for official use or consideration in making designs, estimates, etc.

3. Catalogues and similar descriptive literature for official needs may be procured either through the Chief Quartermaster or the library under the Executive Office.

JAY J. MORROW,
Acting Governor.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., December 11, 1920.

CIRCULAR No. 271.

Effective December 6, 1920, Mr. O. E. Malsbury is designated an accountable official of The Panama Canal, *vice* Mr. F. R. Fitch, and as such will account for all nonexpendable property in use in the Section of Surveys.

ELWYN GREEN,
Acting Auditor, The Panama Canal.

Approved:
JAY J. MORROW, *Acting Governor.*

Additions to Commissary Stock.

Dry Goods Section.

Embroideries, Swiss, cotton, white, yd....	$0.08
Embroideries, Swiss, cotton, white, yd....	.11
Embroideries, Swiss, cotton, white, yd....	.08
Embroideries, Swiss, cotton, white, yd....	.05
Embroideries, Swiss, cotton, white, yd....	.11
Embroideries, Swiss, cotton, white, yd....	.14
Embroideries, Swiss, cotton, white, yd....	.18
Embroideries, Swiss, cotton, white, yd....	.23
Embroideries, Swiss, cotton, white, yd....	.28
Embroideries, Swiss, cotton, white, yd....	.33
Embroideries, Swiss, cotton, white, yd....	.39
Embroideries, Swiss, cotton, white, yd....	.42
Embroideries, Swiss, cotton, white, yd....	.48
Embroideries, Swiss, cotton, white, yd....	.63
Embroideries, Swiss, cotton, white, yd....	.53
Embroideries, Swiss, cotton, white, yd....	.52
Embroideries, Swiss, cotton, white, yd....	.55
Embroideries, Swiss, cotton, white, yd....	.61
Embroideries, Swiss, cotton, white, yd....	.68
Embroideries, Swiss, cotton, white, yd....	.89
Embroideries, Swiss, cotton, white, yd....	.87
Embroideries, Swiss, cotton, white, yd....	.95
Embroideries, Swiss, cotton, white, yd....	.76
Embroideries, Swiss, cotton, white, yd....	.84
Embroideries, Swiss, cotton, white, yd....	1.40
Embroideries, Swiss, cotton, white, yd....	1.50
Embroideries, Swiss, cotton, white, yd....	.53
Handkerchiefs, Swiss, embroidered, cotton, ea....	.17
Handkerchiefs, Swiss, embroidered, cotton, ea....	.12
Handkerchiefs, Swiss, embroidered, cotton, ea....	.14
Handkerchiefs, Swiss, embroidered, cotton, ea....	.20
Organdy, Swiss, colored, yd....	1.10
Organdy, Swiss, white, 45", yd....	1.10

MOVEMENTS OF OCEAN VESSELS.—Continued from page 255.

POINT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Dec. 5	Ulua	United Fruit Co.	Port Limon.
Dec. 5	Apolo	Maritime Union	High seas.
Dec. 6	Heredia	United Fruit Co.	New Orleans.
Dec. 6	Panama	Panama Railroad Steamship Line.	Colombian ports.
Dec. 7	Haiti	French Line	Havre via wayports.
Dec. 7	Tolua	United Fruit Co.	New York via Habana.
Dec. 7	Louisiana	The Texas Co.	Port Arthur.
Dec. 8	Metapan	United Fruit Co.	New Orleans via wayports.
Dec. 8	Carrillo	United Fruit Co.	New York via Kingston.
Dec. 8	Caribbean	Panama Railroad Cattle Industry.	Cartagena.
Dec. 9	Ulysses[9]	Panama Railroad Steamship Line.	Norfolk.
Dec. 9	Logan[10]	United States Army	San Juan.
Dec. 10	Colon	Panama Railroad Steamship Line.	New York via Haiti.

[9] And barge *Manei*.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Dec. 5	Ulua	United Fruit Co.	New York via Habana.
Dec. 5	Caribbean	Panama Railroad Cattle Industry.	Cartagena.
Dec. 6	Apolo	Maritime Union	St. Thomas.
Dec. 7	Chinampa	Standard Oil Co.	Tampico.
Dec. 8	Louisiana	The Texas Co.	Tampico.
Dec. 8	Tolua	United Fruit Co.	Port Limon.
Dec. 8	Metapan	United Fruit Co.	New Orleans.
Dec. 8	St. Aristoll[11]	British Government	Kingston.
Dec. 9	Panama	Panama Railroad Steamship Line.	New York via Haiti.
Dec. 9	Carrillo	United Fruit Co.	N. Y. via Col. & Kingston.
Dec. 9	Heredia	United Fruit Co.	N. O. and wayports.
Dec. 10	Haiti	French Line	Puerto Colombia.
Dec. 11	Logan[10]	United States Army	New York.

[10] Transport.

[11] Tug.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—
Dec. 6	Buenos Aires[2]	Johnson Line	Gothenburg.
Dec. 9	Buenos Aires[2]	Johnson Line	San Francisco.

*Other than ships passing through the Canal.

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Volume XIV. Balboa Heights, C. Z., December 22, 1920. No. 19.

Good Wishes of the Season.

THE PANAMA CANAL,
BALBOA HEIGHTS, C. Z., December 22, 1920.

The Panama Canal extends to all of its patrons and employees the greetings of the Holidays.

The year now drawing to a close has exceeded all previous years in business at the Canal; and the increased traffic has brought with it a closer coordination of all the parts of the Canal organization in the service of the rapid handling, fueling, provisioning, and repair of ships. This service is developing increasing acquaintance and friendship among shipping people and the Canal force, and in recognition and furtherance of this friendship these cordial Holiday greetings are extended.

JAY J. MORROW,
Acting Governor.

Ship Receives 297 Tons of Bunker Coal in 20 Minutes.

A statement of records for rapid coaling of ships at the Cristobal coaling plant was published in THE PANAMA CANAL RECORD of December 15. On December 19 a new record for delivery in 20 minutes was established, when 297 tons 480 pounds were loaded in that time into the bunkers of the steamship *Rio Grande*. The vessel docked at 5.55 p. m.; coaling began at 6.20, and the ship left at 6.40.

The coaling was accomplished by one reloader and was at a rate of 891 tons an hour. The rated capacity of each of the 4 reloaders is 500 tons an hour. The ability of the machines so greatly to exceed their original rated capacity is due to improvements made on them at the coaling plant since they were installed.

Freight Rates Between New York and Colon, Cristobal, and Panama.

The Panama Railroad Steamship Line has issued freight classifications and tariffs Nos. 42, 43, and 44, publishing rates, respectively, from New York to Colon and Cristobal; Colon and Cristobal to New York; and Panama City to New York. The effect of the new tariffs is, with minor exceptions, to restore the rates which were effective prior to August, 1920. Tariff No. 42 cancels Tariff No. 36 and supplements Nos. 1, 2, and 3 thereto; No. 43 cancels No. 41 and supplements Nos. 1, 2, and 3 thereto; and No. 44 cancels No. 40.

Shipping Washington Apples in Cooled Spaces of Refrigerated Vessels.

The steamship *Moerdijk* of the Holland-American Line, due at Balboa December 26 from west coast ports of the United States on the way to Holland, is reported to have her cooled spaces entirely filled with a shipment of 25,000 barrels of apples from the State of Washington. A large shipment of apples carried through the Canal on the *Emdijk* of this line on October 31 is reported to have reached its destination in England in excellent condition.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight December 18, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Sag Harbor	11	20.19	12	6.05	12	16.12	12	17.36	American	Tracy Steamship Co. (S. B.)	264.0	42.2	22.6	Charleston	Acajutla	Coal	3,124	2,504	1,701
Pansa	12	3.37	12	6.46	12	15.26	12	16.02	American	Sudden & Christensen (S. B.)	380.2	53.1	23.7	Sabine	Los Angeles	Coal, sulphur	6,074	5,659	4,034
Cornwall	12	2.18	12	7.10	12	16.57	12	18.13	British	Federal Steam Navigation Co	495.1	63.0	32.3	New York	Auckland	General	9,749	11,766	7,876
Duendes	11	18.55	12	7.51	12	18.16	12	19.50	British	Pacific Steam Navigation Co	390.0	50.0	25.6	Liverpool	Valparaiso	General	3,975	6,014	4,494
De Soto	12	7.50	12	8.50	12	19.06	12	19.23	American	Standard Oil Co	418.0	53.2	30.0	Tampico	Balboa	Crude oil	7,500	7,149	4,527
Lowther Castle	12	6.16	12	12.00	12	20.25	12	21.19	British	James Chambers & Co	412.0	52.0	24.11	New York	Yokohama	General	6,657	5,768	4,367
Waiotapu	12	8.28	12	12.35	12	21.15	13	23.08	British	Union Steamship Co	450.0	58.0	25.2	Newport News	Auckland	General	7,500		
Putney	12	17.38	13	6.19	13	17.11	13	18.18	British	Watts, Watts & Co	340.0	45.0	21.6	Baltimore	San Antonio	Coke	3,720	3,504	2,576
Frederick[1]	12	12.23	13	6.15	13	18.18			American	United States Navy	502.0	69.0	27.2	Norfolk	Balboa[3]				
Henry T. Scott	12	23.48	13	7.16	13	18.25	14	12.30	American	Fred Linderman & Co	234.5	42.7	19.0	New York	San Francisco	Steel	2,223	1,814	951
Mosella	13	3.54	13	6.55	13	17.22	13	18.18	American	McCormick & McPherson (S. B.)	402 6	53.0	26.0	Norfolk	San Diego	Coal	8,025	6,580	4,894
Portuguese Prince	13	6.14	13	8.07	13	19.45	13	20.35	British	Furness Withy S. S. Co	410.0	53.3	25.0	Philadelphia	Shanghai	General	5,290	6,492	4,771
Clyde Maru	13	7.17	13	8.12	13	21.05	13	22.30	Japanese	Kokusai Kisen Kabushiki Kaisha	400.0	53.0	26.0	Newport News	Valparaiso	Coal	6,711	5,868	4,324
Elanchove	13	8.58	13	10.00	13	19.42	13	22.12	Spanish	Elanchove Maritime Co	322.0	41.5	13.0	Avilles	Taltal	Ballast		3,020	2,214
Ansaldo San Giorgio I	12	20.45	13	11.02	13	21 10	15	11.27	Italian	Soc. Nazionale di Nav	350.0	45.0	13.9	Genoa	Valparaiso	General	700	5,864	4,266
West Cayote	14	6.22	14	7.12	14	14.50	14	20 18	American	Williams, Dimond & Co. (S. B.)	410.0	54.0	18.0	Immingham	Vancouver	General	1,582	6,567	4,899
Bartolo	14	6.37	14	12.45	14	19.55	14	20.50	Spanish	Astigarraga Sons	321.0	46.1	21.6	Norfolk	Coquimbo	Coal	4,318	3,347	2,426
Maimoa	14	20.43	15	6.24	15	16.47	15	17.53	British	Shaw, Saville & Albion Co	478.0	63.0	30.0	New York	Lyttleton	General	6,747	11,053	7,895
Oak Branch	14	7.42	15	6.32	15	14.47	15	16.05	British	F. & W. Ritson	385.0	48.9	18.3	Liverpool	Coronel	General	3,537	5,209	4,031
Nero[2]	14	12.18	15	6.37	15	15.46	15	20.10	American	United States Navy	320.0	41.0	20.5	Hampton R'ds	San Francisco	Navy supplies	1,640		
Newport	9	16.03	16	6.16	16	13.06	16	19.10	American	Pacific Mail Steamship Co	326.0	38.2	17.0	Cristobal	San Francisco	General	1,300	3,173	2,163
Waikouaiti	15	13.59	16	6.28	16	14.10	16	15.20	British	Union Steamship Co	362.0	50.0	24.0	Liverpool	Auckland	General	4,500		
Begona I	15	18.04	16	6.33	16	15.58	17	7.56	Spanish	Jose Mario de Urquijo	330.0	48.0	23.0	Norfolk	Iquique	Coal	4,709	3,795	2,793
S. V. Harkness	15	19.30	16	6.35	16	16.10	16	20.12	American	Standard Oil Co	435.6	57.2	27.6	Tampico	Pisagua	Crude oil	8,608	7,443	5,545
Maricopa	15	17.17	16	6.45	16	17.05	16	18.09	Norwegian	W. Wilhelmsen	425.0	54.0	27.0	Tampico	Tocopilla	Crude oil	9,500	6,996	5,118
Yalza	16	5.35	16	8.17	16	17.48	16	18.48	American	North Atl. & Western Co. (S. B.)	400.7	54.2	20.0	Portland	Los Angeles	General	4,540	6,529	4,737
Aysen	14	16.57	16	13.32	16	20.10	16	21.04	Chilean	South American Steamship Line	379.6	44.3	21.6	Cristobal	Valparaiso	General	86	4,535	3,068
Urubamba	13	15.22	17	6.16	17	13.25	17	17.48	Peruvian	Peruvian Line	381.2	41.1	18.0	Cristobal	Callao	General	385	4,808	2,951
Transvaal	17	10.10	17	11.44	17	19.04	17	21.45	Danish	Orient Steamship Co	349.0	49.7	25.6	Norfolk	Mejillones	Coal	6,250	4,853	3,476
Grelcaldy	17	7.33	17	12.05	17	20.12	19	20.16	British	Gould Steamship Co	380.0	50.0	23.0	New York	Yokohama	General	6,080	5,296	3,935
Duquesne	17	18.50	18	6.05	18	15.30	18	16.35	American	Barber Steamship Co. (S. B.)	395.5	55.0	27.3	New York	Manila	Steel and gen	8,500	7,285	5,346
Quilpue	16	6.35	18	6.10	18	13.40	18	16.07	British	Pacific Steam Navigation Co	350.0	46.0	19.0	New York	Guayaquil	General	600		
Maudie	17	13.48	18	6.25	18	17.38	18	18.40	Norwegian	Bugge	385.1	52.0	24.2	Christiania	Valparaiso	Coal, general	6,075	5,178	3,649
Crisfield	17	12.05	18	6.30	18	18.45	19	16.45	American	American Metal Transport (S.B.)	415.0	54.0	27.0	Norfolk	Antofagasta	Coal	8,514	6,932	5,100
Lake Ellijay	17	22.45	18	7.28	18	17.22	18	17.38	American	N. O. & S. A. S. S. Line (S. B.)	253.0	44.0	15.0	New Orleans	Valparaiso	General	3,125	2,920	1,973
Santa Barbara	18	6.15	18	11.10	18	19.25	18	20.25	American	W. R. Grace & Co	404.0	53.0	26.0	New York	Valparaiso	General	6,655	6,789	4,746
Bratsberg	18	11.02	18	11.43	18	20.42	19	18.30	Norwegian	Burgstad Co	345.0	49.0	25.5	Baltimore	Antofagasta	Coke, coal, iron	5,131		
Urko Mendi	18	11.10	18	11.55	18	21.00	18	21.45	Spanish	Sota & Azner	330.0	45.0	23.6	Newport News	Antofagasta	Coal	4,700		

[1] Cruiser. [2] Collier. [3] For orders.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

West Camak	10	7.44	12	6.40	12	14.11	12	14.11	American	E. C. Evans & Sons (S. B.)	410.5	54.0	25.0	Portland	Liverpool	(4)	4,605	6,622	4,880
Inca	11	23.20	12	8.20	12	16.13	12	17.35	British	Pacific Steam Navigation Co	360.6	43.2	23.0	Iquique	Calais	Nitrate of soda	3,711	3,952	2,742
West Inskip	12	9.35	12	10.35	12	18.04	12	18.04	American	Luckenbach Line (S. B.)	410.5	54.3	25.0	Grays Harbor	Boston	Lumber, general	7,263		
Hawaiian	12	10.40	12	11.37	12	20.50	12	20.55	American	American-Hawaiian Line	406.8	51.1	23.0	Tacoma	Boston	Lumber, general	2,754	5,903	4,193
Elmpark	12	23.30	13	7.35	13	14.55	13	16.40	British	J. & J. Denholm	409.2	53.5	26.6	Iquique	Charleston	Nitrate	8,120		
Urubamba	13	6.28	13	8.10	13	15.22	17	6.16	Peruvian	Peruvian Steamship Co	381.2	46.1	17.6	Callao	Cristobal	General	1,438	4,803	2,951
Felix Taussig	13	6.00	13	8.55	13	17.22	13	18.50	American	Crowell & Thurlow	395.0	55.1	28.0	Iquique	Charleston	Nitrates	9,200	6,520	4,772
Alvarado	12	14.30	13	9.28	13	20.40	14	6.25	American	Swayne & Hoyt	245.0	41.5	16.0	San Francisco	Habana	General	2,213	2,122	1,504
Orcoma	13	6.10	13	9.30	13	18.40	14	12.58	British	Pacific Steam Navigation Co	511.6	62.2	27.3	Coronel	Liverpool	General	5,589	12,267	7,942
D. G. Schofield	13	6.30	13	10.30	13	20.00	14	6.20	American	Standard Oil Co	439.5	58.0	31.0	San Francisco	London	Lubricating oil	11,000	8,912	6,254
Arzila	13	12.10	13	12.53	13	21.28	20	7.00	British	Royal Mail Steam Packet Co	285.0	41.3	15.3	Champerico	Cristobal	General	410	2,856	1,797
Mineric	13	14.10	14	6.36	14	14.13	14	15.24	British	Andrew Weir & Co	405.0	52.0	25.6	Mejillones	Norfolk	Nitrates	7,724	6,139	4,698
Delft	13	13.10	14	6.39	14	15.05	14	17.53	Dutch	Royal Netherland Steamship Co.	370.0	50.0	26.0	Caleta Buena	Azores[3]	Nitrates	6,700	5,862	4,393
De Soto	12	19.06	14	7.19	14	15.25	14	19.45	American	Standard Oil Co	419.0	53.2		Balboa	Tampico	Ballast		7,149	4,527
Elveric	14	6.00	14	8.07	14	16.35	14	19.00	British	Andrew Weir & Co	399.6	53.0	26.0	Taltal	Falmouth[3]	Nitrates	7,550	6,270	4,481
Aysen	14	0.30	14	8.36	14	16.57	16	13.32	Chilean	South American Steamship Co	379.6	44.3	19.0	Talcahuano	Cristobal	General	9	4,535	3,068
Peter H. Crowell	14	11.25	14	12.35	14	20.10	14	22.25	American	Crowell & Thurlow	313.5	46.1	20.6	Paita	New York	Sugar	3,900	3,351	2,318
La Habra	14	19.10	15	7.26	15	14.35	15	16.33	Norwegian	W. Wilhelmsen	424.8	57.0	18.6	Pisagua	Tampico	Ballast		7,053	5,085
Saint Andre	15	1.00	15	8.00	15	17.05	16	12.30	French	Cia. Generale Transatlantique	397.9	50.3	24.6	Talcahuano	Bordeaux	(5)	6,845	5,917	4,146
Acajutla	15	5.00	15	8.52	15	15.40	18	6.15	British	Pacific Steam Navigation Co	215.7	33.5	12.9	Buenaventura	Cristobal	(6)	301	1,273	706
Mineola	15	7.30	15	9.10	15	16.25	16	2.45	American	W. R. Grace & Co	298.6	40.0	17.6	Eten	Norfolk	General	2,000	2,835	1,822
Orduna	15	8.15	15	9.27	15	17.50	16	12.52	British	Pacific Steam Navigation Co	550.3	67.3	30.6	Liverpool	Liverpool	General	6,756½	17,163	11,905
Major Wheeler	16	14.40	17	6.40	17	15.13	17	15.13	American	Lind Navigation Corp. (S. B.)	305.0	46.0	23.0	Caleta Colosa	Baltimore	Nitrates	4,500	3,641	2,214
Tamaha	16	20.00	17	7.37	17	15.35	17	16.58	British	Standard Transportation Co	420.5	54.4	19.0	San Francisco	Mata Redondo	Ballast		6,673	4,689
Brave Coeur	17	12.05	18	6.47	18	15.00	18	17.34	American	Struthers & Dixon (S. B.)	402.6	54.8	25.0	San Francisco	London	Lumber	(8)	6,930	5,178
La Brea	17	20.30	18	7.32	18	15.20	18	16.29	American	Union Oil Co	435.0	56.0	19.0	Antofagasta	Tampico	Ballast		7,224	4,971
Forst	17	22.30	18	8.07	18	16.20			British	George Dodd & Co	450.2	58.2	24.1	Portland	United King	Wheat	7,640	7,606	5,200
Genoa Maru	18	9.50	18	11.36	18	19.10	18	21.38	Japanese	Nippon Yusen Kaisha	425.0	54.0	19.9	Shanghai	New York	General mdse	4,858	6,097	5,063
Manavi	18	12.05	18	12.45	18	20.04			British	Pacific Steam Navigation Co	216.0	35.1	11.9	Guayaquil	Cristobal	(7)	323	1,357	884

[4] Grain, lumber, and general. [5] Nitrate, beans, etc. [6] Coffee, cocoa, hides, etc. [7] Ecuadorian produce. [8] 4,289,014 feet B. M.

Hours are expressed on the 24 hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
Dec. 12	Toloa	United Fruit Co	Port Limon.	Dec. 11	Conestoga	United States Navy	High seas.
Dec. 11	Tamar	Royal Mail Steam Packet Co	Hamburg via wayports.	Dec. 12	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Dec. 10	Whippoorwill	United States Navy	High seas.	Dec. 12	Toloa	United Fruit Co	New York via Habana.
Dec. 13	Parismina	United Fruit Co	New Orleans.	Dec. 12	Whippoorwill	United States Navy	High seas.
Dec. 14	Cristobal	Panama Railroad Steamship Line	Norfolk.	Dec. 12	Crescent[9]	H. A. Bodden	Colon.
Dec. 14	Calamares	United Fruit Co	New York via Habana.	Dec. 13	Tamar	Royal Mail Steam Packet Co	Puerto Colombia.

[9] Schooner.

(Continued on page 270, column 2.)

Advance in Fares on Taboga Launch Service.

On account of an advance in the hourly charge for the use of the launch, the fares for transportation between Balboa and Taboga have been increased. The following are the present one-way fares:

Adults, employees, 50 cents; nonemployees, 75 cents; children from 6 to 12 years of age, employees' rate, 35 cents; nonemployees, 50 cents.

The launch leaves Balboa on week days at 4.30 p. m., and on Sundays and holidays at 10 a. m. From Taboga it leaves at 6.20 a. m. on week days, and on Sundays and holidays at 6.30 p. m.

Name of Passenger Launch Selected from Suggestions Made by Employees.

The steam launch *S. P. 2232*, transferred by the Navy Department to The Panama Canal, as reported in THE PANAMA CANAL RECORD of October 27, 1920, is to be named the *Gold Star*, in honor of those who lost their lives in the World War.

The name was chosen in public competition. Canal employees and others were invited, through the *Star & Herald* of Panama, to offer suggestions for naming the vessel, and in the 3 days that the contest was open 255 names, of wide variety, were submitted. The name *Gold Star* was suggested by Mr. Louis F. Hauss of Cristobal.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended December 18:

Barges *Nos. 131*, *134*, and *135*, general repairs; steamship *Marne*, general repairs and rebuilding; dredges *Nos. 83* and *84*, general repairs; launch *Captain Wilhelm*, hull repairs and installation of new engine; tug *Bohio*, general repairs and rebuilding; launch *Limon*, general repairs and overhauling; steamship *Olockson*, pumping out and trimming ship; launches *Pilot*, repairs to hull; *Santa Rita*, rebuilding; submarine *R-24*, periodical overhaul; U. S. S. *Cleveland*, miscellaneous minor repairs to machinery; schooner *Astoria*, small miscellaneous repairs to engine and crank shaft; supply boat *No. 2*, cleaning cylinders; launch *Coco Solo*, adjust valves and renew adjusting screws; motor tug *Gaither*, miscellaneous repairs to engine; steamships *Waiotapu*, braze copper pipe and manufacture 2 piston rings; *Pomona*, repairs to feed pump; *West Comak*, repairs to H. P. rings and refrigerating machine; *Stanley*, braze 1 sea suction line for feed pump; *Begona No. 1*, repairs to anchor windlass; mine yawl *101*, hull repairs and overhauling of engine.

The following vessels were at the Cristobal shops for repairs during the week ended December 20:

Steamships *Cristobal*, *Advance*, *Allianca*, *Achilles*, and barge *Darien*, miscellaneous repairs and painting to engine, deck, and steward departments; steamships *Arzila*, repair winches and install davits; *Balboa*, clean and paint hull, renew propeller and general overhaul; *C. A. Canfield*, repair engine room telegraphs; *Caribbean*, scale boilers, repair ammonia coil, hatch door, piping, etc.; U. S. S. *Whippoorwill*, repair boilers, valves, and auxiliaries, manufacture and install topmast and 1 towing bridge, etc.; steamship *Apalachee*, repair hull, stern tube, etc.; tug *Engineer*, miscellaneous repairs to boiler, engine, and auxiliaries; steamships *Ucayali*, make and install new key for shaft coupling, repair sanitary pipe, electric weld hatch combing, and hawse pipe; *Forest*, open up H. P. and M. P. cylinders and valves, etc.; *De Soto*, *Urubamba*, *Benjamin Brewster*, U. S. S. *Conestoga*, steamships *Crisfield*, *Quilpue*, U. S. A. T. *Cambrai*, steamships *Lake Ellijay*, *Shropshire*, minor repairs.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending December 18, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Toloa	United Fruit Co.	December 12.	December 12.	57	24
Caribbean	Panama Railroad Cattle Industry.		December 12.		4
Ansaldo San Giorgio I	Societe Nazionale di Navigazione.	December 12.	December 13.	23	(2)
Tamar	Pacific Steam Navigation Co.		December 13.		310
Parismina	United Fruit Co.	December 13.	December 16.	1,296	143
Newport	Pacific Mail Steamship Co.		December 16.		1,612
Colon	Panama Railroad Steamship Line.		December 16.		2,606
Gen. H. F. Hodges	Panama Railroad Steamship Line.		December 16.		2,083
Urubamba	Peruvian Line	December 13.	December 17.	1,438	387
Arzila	Pacific Steam Navigation Co.	December 13.		413	
Aysen	Chilean Steamship Co.	December 14.	December 16.	852	86
Cristobal	Panama Railroad Steamship Line.	December 14.	December 17.	9,090	(2)
Calamares	United Fruit Co.	December 14.	December 15.	757	6
Abangarez	United Fruit Co.	December 15.	December 15.	½	20
Acajutla	Pacific Steam Navigation Co.	December 15.	December 18.	282	(2)
Asian	Leyland Line	December 15.	December 18.	875	678
Quilpue	Pacific Steam Navigation Co.	December 16.	December 18.	440	331
Caribbean	Panama Railroad Cattle Industry.	December 16.		300	
Eika III	Caribbean Steamship Co.	December 16.	December 16.	(1)	465
C. A. Canfield	Pan.-Amer. Petroleum Co.	December 16.	December 18.	8,600	(2)
Manuel Calvo	Spanish Line	December 18.		326	
Manavi	Pacific Steam Navigation Co.	December 18.		326	

[1] No cargo discharged. [2] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending December 18, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Ansaldo San Giorgio I,	Societe Nazionale di Navigazione.	December 13.	December 15.	40	
Urubamba	C. P. de V.	December 13.	December 13.		
Aysen	C. S. A. de V.	December 14.	December 14.	50	
De Soto	West India Oil Co.	December 12.	December 14.	7,577	
Acajutla	Pacific Steam Navigation Co.	December 15.	December 15.	3	
Newport	Pacific Mail Steamship Co.	December 16.	December 16.		39
Urubamba	C. P. de V.	December 17.	December 17.	2	
Balcatta	Pacific Motorship Co.	December 17.	December 18.	211	
Manavi	Pacific Steam Navigation Co.	December 18.	December 18.	5	
Genoa Maru	Nippon Yusen Kaisha	December 18.	December 18.	1	

January Weather Probabilities.

The following weather conditions may be expected during the month of January, 1921. Predictions are based on the weather records at Colon and Balboa Heights for the past 13 and 15 years, respectively:

Winds—Fresh northerly trade winds will prevail, and there will be an increase in the average wind velocity on both coasts, compared with December conditions. The hourly wind velocity will average from 12 to 16 miles on the Atlantic Coast, north and northeast winds prevailing. The maximum velocity is not likely to exceed 35 miles an hour.

The prevailing winds will continue from the northwest on the Pacific Coast, and the average hourly velocity will range from about 8 to 12 miles. The maximum velocity on the Pacific side may not be expected to exceed 30 miles an hour.

Rain—January is a normally dry season month, but occasional light showers may be expected. The dry season rainfall is usually heavier on the Atlantic side. The average January rainfall at Colon for the past 50 years is 3.74 inches, and the January average at Balboa Heights for the past 22 years is 0.95 inch. No heavy rains are likely to occur during the month on the Pacific side, and probably none on the Atlantic Coast.

Fogs—No fogs are likely to occur during the month on either coast, but occasional night and early morning fogs may be expected over the interior. All fogs should lift or be dissipated by 8.30 a. m.

Temperature—There is little change in the average air temperature on the Isthmus from month to month. The average shade temperature should be about 80 degrees Fahrenheit on both coasts.

On the Atlantic Coast the temperature is not likely to rise higher than 88° F. nor fall lower than 70° F., while on the Pacific side the maximum temperature may be as high as 93° F. and the minimum may be as low as 63° F.

The average daily range in temperature is about 18° F. on the Pacific Coast and over the interior, and approximately 7° F. on the Atlantic Coast. The small daily range in temperature on the Atlantic Coast is due to the effects of the prevailing equable trade winds.

Barometric pressure—The atmospheric pressure during the month of January should be slightly higher than the pressure in December. The average sea-level pressure will be about 29.88 inches. The maximum pressure for the month is not likely to exceed 30.04 inches, or the minimum to be lower than 29.70 inches.

Relative humidity—The relative humidity of the atmosphere will be lower with the arrival of settled dry season weather conditions. The humidity should average about 80 per cent over both coasts, but the daily range will be greater on the Pacific Coast, where the nighttime humidity is higher and the daytime humidity much lower than on the Atlantic Coast.

Storms—No severe general storms are likely to occur during the month, although so-called "northers" occasionally reach as far south as the Atlantic entrance of the Canal at this season of the year. Few, if any, local thunderstorms are likely to occur on either coast, and smooth seas and fair weather may be expected at the Pacific entrance.

Tides—Tidal fluctuations need not be considered in navigating the Atlantic entrance to the Canal, as the average tidal range on the Atlantic side is but about 1 foot and the maximum range approximately 2 feet.

Panama (Balboa) tide table are given below:

Day of— W.	Day of— Mo.	Time and Height of High and Low Water.				Day of— W.	Day of— Mo.	Time and Height of High and Low Water.				Day of— W.	Day of— Mo.	Time and Height of High and Low Water.			
S	1	3:03	9:04	**3:22**	**9:34**	W	12	5:41	11:58	**6:09**	.....	S	23	2:37	9:13	**3:13**	**9:38**
		1.4	14.4	**1.6**	**14.7**			14.1	0.8	**14.6**	.....			15.5	−0.6	**15.5**	**−0.1**
S	2	4:02	10:03	**4:19**	**10:34**	Th	13	0:16	6:16	**12:34**	**6:43**	M	24	3:33	10:03	**4:03**	**10:28**
		2.0	13.4	**2.5**	**13.9**			1.6	14.0	**1.1**	**14.5**			16.1	−1.5	**16.3**	**−1.0**
M	3	5:02	11:09	**5:18**	**11:39**	F	14	0:53	6:51	**1:10**	**7:17**	Tu	25	4:28	10:50	**5:01**	**11:16**
		2.5	12.7	**3.2**	**13.4**			1.8	13.7	**1.5**	**14.4**			16.6	−2.1	**16.8**	**−1.4**
Tu	4	6:03	**12:18**	**6:20**	.....	S	15	1:34	7:21	**1:49**	**7:52**	W	26	5:21	11:36	**5:52**	.....
		2.8	**12.5**	**3.7**	.....			2.1	13.4	**2.0**	**14.2**			16.7	−2.2	**17.1**	.....
W	5	0:40	7:04	**1:16**	**7:22**	S	16	2:18	8:05	**2:33**	**8:32**	Th	27	0:02	6:13	**12:22**	**6:41**
		13.3	2.8	**12.6**	**3.8**			2.4	13.0	**2.4**	**13.9**			−1.4	16.6	**−1.8**	**16.9**
Th	6	1:32	8:02	**2:07**	**8:19**	M	17	3:08	8:51	**3:25**	**9:21**	F	28	0:50	7:01	**1:10**	**7:28**
		13.4	2.5	**12.9**	**3.5**			2.6	12.6	**2.8**	**13.5**			−1.0	16.1	**−1.0**	**16.3**
F	7	2:18	8:52	**2:54**	**9:08**	Tu	18	4:03	9:47	**4:21**	**10:21**	S	29	1:41	7:49	**1:59**	**8:14**
		13.5	2.0	**13.2**	**3.0**			2.7	12.3	**3.1**	**13.3**			−0.2	15.3	**0.1**	**15.4**
S	8	3:02	9:34	**3:37**	**9:50**	W	19	50:1	10:59	**5:25**	**11:30**	S	30	2:34	8:37	**2:52**	**9:02**
		13.7	1.5	**13.6**	**2.5**			2.6	12.3	**3.1**	**13.4**			0.7	14.2	**1.3**	**14.3**
S	9	3:44	10:13	**4:18**	**10:28**	Th	20	6:06	**12:12**	**6:33**	.....	M	31	3:30	9:29	**3:47**	**9:55**
		13.9	1.2	**13.9**	**2.0**			2.3	**12.7**	**2.8**	.....			1.6	13.0	**2.4**	**13.3**
M	10	4:25	10:49	**4:57**	**11:04**	F	21	0:38	7:13	**1:17**	**7:42**						
		14.1	0.8	**14.2**	**1.7**			13.9	1.6	**13.5**	**2.1**						
Tu	11	5:04	11:24	**5:33**	**11:41**	S	22	1:39	8:16	**2:16**	**8:44**						
		14.1	0.8	**14:4**	**1.6**			14.7	0.6	**14.5**	**1.0**						

The tides are placed in the order of their occurrence; the *times* of high and low tides are shown on the upper lines. The figures in boldfaced type are hours and elevations between noon and midnight; *ante meridian* figures are given in the ordinary lightfaced type. The time is Cosmopolitan Standard for the meridian 75° W.

The *elevations* of the water are shown on the second line for each day; a comparison of consecutive heights will indicate whether it is high or low water. Heights are reckoned from mean low water springs, which is 8.3 below mean sea level and is the datum of soundings on the Coast and Geodetic Survey charts for this region. The depth of water may accordingly be estimated by adding the tabular height of the tide to the soundings, unless a minus (−) sign is before the height, in which case it is to be subtracted. The annual inequality or variation in the mean sea level is included in the predictions.

Proposed Passenger and Cargo Line Between North Pacific Ports and Spain, Southern France, Italy, and Greece.

It is reported that Swayne & Hoyt, who have sent numbers of ships through the Canal, have made application for 3 of the 535-foot passenger and cargo vessels building for the United States Shipping Board, with the intention of establishing a service between the west coast of North America and Spain, southern France, Italy, and Greece.

Lines from these areas, with the exception of Greece, are now operating to the Canal and through it to the west coast of South America, but there are no passenger lines between them and the Pacific Coast of North America, although some of the lines from the United Kingdom and western Europe to the west coast of North America call at ports in northern France.

Revision of Telephone Directory.

The copy for a revised telephone directory, to be issued as of January 15, 1921, will go to the printer January 1. All changes or corrections in the present directory should be forwarded to the Supervisor of Telephones, Balboa Heights, not later than January 1. Proof corrections will be made to January 1.

Christmas at the Aspinwall.

The Hotel Aspinwall announces a dance on Christmas Eve and a special turkey dinner on Christmas Day. The $2.50 excursion rate, for luncheon and dinner and transportation from and to Balboa, will apply on Christmas Day.

Accessions to the Canal Library.

The following are among the books that have been added to the Panama Canal Library during the past week:

"A New Conscience and an Ancient Evil," by Jane Addams; "Woman Triumphant," by Vicente Blasco Ibañez; "Spiritual Voices in Modern Literature," by T. H. Davies; "Mill on the Floss," by George Eliot; "Seekers After God," by Frederic William Farrar; "The Log of the Snark," by Mrs. Charmian K. London; "The Treasure of the Humble," by Maurice Maeterlinck; "Reynard, the Fox," by John Masefield; "When Love Flies Out O' the Window," by Leonard Merrick; "In Our Town," by W. A White.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal Zone post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights (telephone 286):

Animal husbandman (male and female); $1,800 to $2,500 a year; form 2118; announcement No. 11; age, 21 but not 45 years; a vacancy exists in the Bureau of Animal Industry, Department of Agriculture, Washington, D. C.; January 11, 1921.[1]

Domestic science teacher (male and female); $60 to $140 per month; form 1312; announcement No. 7; age, 21 but not 55 years; vacancies exist in the Ordnance Department at Large; January 5, 1921.

Duplicating machine expert (male and female); $1,500 a year; form 1800; announcement No. 687; age, 20 but not 50 years; vacancies exist in the War Department, Washington, D. C.[1]

High-school teachers, $1,200 to $1,800 a year; primary specialists, $1,500 to $2,000 a year; model primary teachers, $1,400 to $1,600 a year; form B. I. A. 2; announcement No. 31-amended; age (women) 21 years and over; (men) 21 but not 40 years; vacancies exist in the Philippine Service.[2]

Investigator qualified in government administration (male and female); $3,500 to $4,500 a year; form 2118; age, 30 years but not 55 years; vacancies exist in the departmental service, Washington, D. C.; January 11, 1921.[1]

Kindergarten teacher (male and female); $60 to $140 a month; form 1312; announcement No. 6; age, 20 but not 55 years; vacancies exist in the Ordnance Department at Large; January 5, 1921.

Manual training teacher (male and female); $60 to $140 a month; form 1312; age, 21 but not 50 years; vacancies exist in the Ordnance Department at Large; January 18, 1921.

Roentgenologist, $200 to $250 a month; associate roentgenologist, $130 to $180 a month; assistant roentgenologist, $90 to $130 a month; junior roentgenologist, $70 to $90 a month (male and female); form 1312; age, 18 but not 55 years; vacancies in the Public Health Service; April 5, 1921.[1]

Expert in commerce and finance (male and female); $2,000 to $2,500; form 2118; age, 21 but not 45 years; a vacancy exists in the Bureau of Foreign and Domestic Commerce, Department of Commerce; January 18, 1921.[1]

Field assistant in forest pathology (male and female); $1,440 to $1,800 a year; form 1312; age, 21 but not 40 years; a vacancy exists in the Bureau of Plant Industry, Department of Agriculture; January 19, 1921.

Map printer; $1,320 a year; age, 24 but not 65 years; lithographic pressman; $1,800 a year; age, 20 but not 65 years (male and female); form 1800; announcement No. 13; a vacancy exists in the Geological Survey, Washington, D. C.; January 11, 1921.[2]

Marine draftsman (hull); $181.48 a month; topographic draftsman, $179.16 a month (male and female); form 1312; announcement No. 15; age, 20 but not 45 years; vacancies in The Panama Canal Service; January 11, 1921.[2]

Metal mining engineer, $4,000 to $4,800 a year; associate metal mining engineer, $3,000 to $4,000 a year; assistant metal mining engineer, $2,000 to $3,000 a year; junior metal mining engineer, $1,500 to $2,000 a year (male and female); form 2118; age, below 45 years; vacancies exist in the Bureau of Mines, Department of the Interior, January 18, 1921.[2]

Railway mail clerk (male and female); $1,600 a year; form 304; announcement No. 18; age, 18 but not 35 years; vacancies exist in the Railway Mail Service; January 15, 1921.

Shepherd; No. 5-amendment. The third line of first paragraph has been amended, the words "with house and garden free" stricken out.

[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

[2] Nonassembled. Applications will be received at any time until further notice.

Deceased and Insane Employees.

The estates of the following deceased or insane employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estate may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

DECEASED.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
James Burrow	944	United States	Ancon	Health Department	December 5, 1920.
John Farrington	54743	St. Thomas	Colon	Panama Railroad	December 2, 1920.
James Webster	22442	Barbados	Panama	Panama Railroad	November 23, 1920.
Edwin B. Kenney	3338	United States	Cristobal	Panama Railroad	December 11, 1919.
William J. Morrissey	.....	United States	Cristobal	The Panama Canal	November 12, 1920.
Juan Bautista Botello, *alias* J. Ballello *alias* Jesus Bollelo	22748	Panama	Taboga	Panama Railroad	March 19, 1920.

INSANE.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of commitment.
George Munroe, *alias* Monroe	31028	Jamaica	Colon	The Panama Canal	September 30, 1920.

Official Circulars.

Appointment.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 15, 1920.

CIRCULAR No. 661-92:

Mr. Albert C. Hindman, District Attorney, having returned to duty, Mr. James W. Blackburn is hereby relieved of the duties of Assistant District Attorney and appointed, effective this date, Magistrate in and for the Balboa subdivision of the Canal Zone.

JAY J. MORROW,
Acting Governor.

Appointment.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 16, 1920.

CIRCULAR No. 661-93:

By direction of the Governor, Mr. Alfred H. Mohr is appointed Collector of The Panama Canal, effective December 24, 1920, *vice* Maj. Thomas L. Clear, U. S. A., resigned.

JAY J. MORROW,
Acting Governor.

Service Ratings and Reduction of Force.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 17, 1920.

CIRCULAR No. 604-5:

1. Employees with equal service ratings in workmanship and conduct shall be considered equal in efficiency, and in case of a reduction of force the discharge of employees with equal service ratings shall be governed by other factors.

2. Circular No. 604-1, defining the ratings to be given employees in workmanship and conduct, supersedes paragraph 7 of Circular No. 604, but does not otherwise affect the provisions contained in Circular No. 604.

JAY J. MORROW,
Acting Governor.

Cement Bags Used on the Work.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., December 17, 1920.

CIRCULAR No. 273:

Effective at once cement bags used on the work will be dropped only on the affidavit of the custodian. They must be covered by survey re-

quests, form 197-2, which must show where they were used and the account numbers to which they are to be charged.

Survey requests covering cement bags used on the work must be based on actual inventories taken as often as necessary, and at least once every 6 months, to determine the number that have been used, and must not include bags lost or disposed of in any other way.

ELWYN GREENE,
Acting Auditor, The Panama Canal.

Approved:
JAY J. MORROW,
Acting Governor.

Christmas and New Year's Train Schedule.

PANAMA RAILROAD COMPANY,
OFFICE OF MASTER OF TRANSPORTATION,
BALBOA HEIGHTS, C. Z., December 16, 1920.

CIRCULAR No. 1708:

To all concerned—Saturday schedules will be operated Friday, December 24, and Friday, December 31.

Inasmuch as Christmas and New Year's fall on Saturday, no change will be made in the regular Saturday train schedules for those dates.

Local freights will not run Saturday, December 25 nor Saturday, January 1, 1921.

W. F. FOSTER,
Master of Transportation.

Approved:
S. W. HEALD,
Superintendent.

Examinations for Junior Engineer and Surveyor.

THE PANAMA CANAL,
EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., December 18, 1920.

HEADS OF DEPARTMENTS AND DIVISIONS:

Examinations for junior engineer and surveyor in The Panama Canal service are hereby announced to be given at Balboa Heights, C. Z., in Room 314, Administration Building, on Wednesday, January 5, 1921, beginning at 8 a. m. Five hours will be allowed for completing these examinations.

According to Circular No. 603-13, all promotions to the grade of junior engineer shall be made by selection from an eligible list established by means of an examination held by the Local Board of Examiners for the promotion of recorders and surveyors. This examination will include the following subjects:

1. Mathematics.
2. Surveying.
3. Design and construction.

The weights to be given these subjects will be decided at a later date, but the applicants will be given this information before beginning the examination.

This examination is open to all recorders, surveyors, and draftsmen now in the service of The Panama Canal.

The examination for surveyor is open to all recorders and draftsmen employed by The Panama Canal.

The Board will endeavor to make these examinations as practical as possible to the work of The Panama Canal by incorporating in the examination test, questions made up from suggestions by the heads of the various departments and divisions who employ engineers.

Application to take these examinations should be made to the Secretary of the Local Board at Balboa Heights, from whom further detailed information may be obtained relative to these examinations.

LOCAL BOARD OF EXAMINERS,
J. F. WARNER,
Secretary.

Stations for Watchman Clocks.

THE PANAMA CANAL,
MECHANICAL DIVISION,
BALBOA, C. Z., December 14, 1920.

TO HEADS OF DEPARTMENTS AND DIVISIONS:

The Mechanical Division frequently receives orders for additional stations (key and box) for watchman clocks sent to the instrument repair shop for repairs. Up to the present time such orders have been filled from a stock of stations taken from surveyed clocks, as the manufacture of new keys, on account of peculiar design, is very costly; some of the clocks being of foreign make.

As the above-mentioned stock is now exhausted, it is requested that all unused stations at present on hand and available, and it is believed there are many, be forwarded to the instrument repair shop. Such stations, which were issued with the clocks, are expendable and should be returned without charge.

E. G. KINTNER,
Superintendent, Mechanical Division.

Insufficiently Addressed Mail.

The following insufficiently addressed mail matter has been received in the office of the Director of Posts, and may be obtained upon request of the addressee. Request for forwarding may be made by telephone, calling No. 182, Balboa:

Anderson, A.
Angesola, Miss Antoinette
Basraoni, Joseph C.
Bedore, Philip
Blackman, Wilmot
Burnett, Mrs. H. (2)
Clarke, Waldo E.
Cope, Walter
Corbet, Harry
Corpron, Theo. F.
Cater, Anostacio
Daujhma, Nathaniel A.
Diaz, Waldina
Ellis, Alex A.
Foltz, Charles H.
Frazer, Thomas A.
Fria, Jose Catalini
Fritzen, Fritz
Gannon, William E.
Goodwin, Willie
Graham, Angela
Griffith, Frank
Gustave, Rosa[1]
Hogg, Charles
Heiro, James[1]
Holt, R. L.
Jennett, Cristeen
Kennedy, Mrs. Edward
King, Dr. P. R.
Marchand, Mlle. Auran[2]
Matton, Wm. G.
Mendoza, Cesario
Merrifield, Lee[2]
Miguelo, S.
Miller, A. I.[1]
Miller, Franklin C. (2)
Morris, Rev. J. C.
Mosser, Miss Alberta
McBeno, H.
McCullough, James F.
Nathansen, Ruddy
Nicholson, Mrs. Jas. H.
Ortiz, Enriques
Parker, Harry
Paulsen, J. P.
Price, Denver
Reece, Joseph A.
Rischman, J. F.
Roberts, Agnes
Shong, Roger
Smart, Mrs. C.
Smith, Deadrick
Tuttle, Dr. H. K.
Ward, L. E.
Will, J. C.
Wilson, Mrs. C. H.
Young, Jessie

[1] Paper. [2] Card.

Additions to Commissary Stock.

Bakery Section.

Bread, hard, lb	$0.13

Dry Goods Section.

Suiting. English:	
Serge, Indigo, 56/8", yd	5.80
Tweed, Donegal, imitation, 54", yd	1.85
Dress goods:	
Nets, Swiss, white, cotton, mosquito, 54", yd	.65
Organdy, Swiss, cotton, embroidered, all-over, 44", yd	1.05
Voile, Swiss, colored, embroidered all-over, yd	1.00
Voile, Swiss, all cotton embroideries, 44/45", yd	1.40
Voile, flouncing, Swiss, all cotton embroideries, 44/45", yd	1.00
Handkerchiefs, linen, Irish, embroidered, ea	.20
Handkerchiefs, linen, Irish, embroidered, ea	.30

Handkerchiefs, linen, Irish, embroidered, ea	$0.41
Handkerchiefs, linen, Irish, embroidered, ea	.47
Handkerchiefs, linen, Irish, embroidered, ea	.51
Handkerchiefs, linen, Irish, embroidered, ea	.25
Handkerchiefs, linen, Irish, embroidered, ea	.68

Rainfall from November 1 to November 30, 1920, Inclusive.

STATIONS.	Maximum in 1 day.	Date.	Total.
Pacific section—	*Ins.*		*Ins.*
Balboa	4.57	28	17.35
Balboa Heights	5 33	28	19.22
Miraflores	4.46	28	17.33
Pedro Miguel	2.95	28	14 38
Rio Grande	2.08	11	9.60
Central section—			
[1] Culebra	2.03	20	11.68
[1] Camacho	1 35	7	9.72
Empire	2 07	11	9.30
Gamboa	4 04	11	13.63
[1] Juan Mina	1.46	21	9.16
Alhajuela	2 63	19	10.15
[1] Vigia	1.61	19	12.49
[1] Darien	2.10	7	10.25
[1] Trinidad	2.49	19	9.10
[1] Monte Lirio	3 21	7	10.39
Atlantic section—			
Gatun	1.17	7	9 78
[1] Brazos Brook	2.59	22	14 43
Colon	4.34	21	21 27
[2] Boeas del Toro	1.19	26	4 59
Porto Bello	6 11	7	14.59

[1] Standard rain gauge—readings at 5 p. m. daily.
Automatic rain gauge at unstarred stations—values, midnight to midnight.
[2] Standard rain gauge—readings at 8 a. m. daily.

November Rainfall for Three Years.

Stations.	INCHES. 1918	1919	1920	Station average.	Years of record.	Rainy days, 1920.
Pacific section—						
Balboa	8.62	5.10	17.35	9.49	22	22
Balboa Heights	9.61	4 97	19.22	10.48	24	21
Miraflores	5.88	5.47	17.33	10.95	13	22
Pedro Miguel	7.16	6.02	14.38	11.10	13	21
Rio Grande	7.75	6.66	9.60	11.16	16	21
Central section—						
Culebra	7.28	7.40	11.68	12.24	32	21
Camacho	8.63	6.00	9.72	12.66	15	18
Empire	7.19	6.65	9.30	11.39	16	24
Gamboa	5.86	3.50	13.63	11.92	38	24
Juan Mina	6.78	7 59	9.16	12.13	11	22
Alhajuela	6.94	9 79	10.15	13.95	22	26
Vigia	8.40	5.99	12.49	14.02	13	26
Frijoles	14.14	11 11	10.25	12.88	8	21
Trinidad	7.73	7.56	9.10	16.42	13	21
Monte Lirio	15.37	9.09	10.39	19 71	13	19
Atlantic section—						
Gatun	11 49	7.19	9.78	19.03	16	24
Brazos Brook	15.04	5.22	14.43	20.72	15	21
Colon	14.23	6.63	21.27	21.04	50	22
Porto Bello	.....	7.74	14.59	25.94	8	27
Boeas del Toro	10.21	4.44	4.59	9.96	12	15

MOVEMENTS OF OCEAN VESSELS.—Continued from page 263.

PORT OF CRISTOBAL—continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Dec. 15	O-13 and O-16[10]	United States Navy	Cartagena.
Dec. 15	Abangarez	United Fruit Co.	New Orleans via wayports.
Dec. 15	Sciota[11]	United States Navy	High seas.
Dec. 15	Manchioneal	United Fruit Co.	Kingston.
Dec. 15	Asian	Leyland Line	Liverpool via wayports.
Dec. 16	Apalachee	United States Shipping Board	Manzanillo.
Dec. 16	Eika III	K. Sandass	Puerto Colombia.
Dec. 16	Cambrai	United States Army	New York.
Dec. 16	C. A. Canfield	Pan-Amer. Pet. and Transp. Co.	Tampico.
Dec. 16	Caribbean	Panama Railroad Cattle Industry	Cartagena.
Dec. 18	Manuel Calvo	Spanish Line	Barcelona via wayports.

[10] Submarines. [11] Tug.

Date.	Vessel.	Line.	From—
Dec. 17	Balcatta[13]	Pacific Motorship Co.	Vancouver.

[13] Motor ship.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Dec. 14	Ulysses[12]	Panama Railroad Steamship Line.	Norfolk.
Dec. 15	Calamares	United Fruit Co.	Port Limon.
Dec. 15	Abangarez	United Fruit Co.	New Orleans.
Dec. 15	Manchioneal	United Fruit Co.	Bocas del Toro.
Dec. 16	Colon	Panama Railroad Steamship Line.	New York via Haiti.
Dec. 16	Parismina	United Fruit Co.	New Orleans, Bocas del Toro, and Habana.
Dec. 16	Eika III	K. Sandass	New York.
Dec. 17	Cristobal	Panama Railroad Steamship Line.	Norfolk.
Dec. 18	C. A. Canfield	Pan. Amer. Pet. and Transp. Co.	Tampico.
Dec. 18	Asian	Leyland Line	New Orleans.

[12] And barge *Manel.*

PORT OF BALBOA.

Date.	Vessel.	Line.	For—
Dec. 18	Balcatta[13]	Pacific Motorship Co.	Valparaiso.

[13] Other than ships passing through the Canal.

Schedule of Official Jitney Service.

Following is the schedule of the official jitney plying between Balboa shops and the Ancon police station, carrying employees in the conduct of official business, upon presentation of passes issued by the Chief Quartermaster or of the "special pass" issued by the Governor:

FROM ANCON POLICE STATION TO BALBOA SHOPS.

Police Station	Leave on the hour and half hour.
Administration Building	Leave 7 minutes and 37 minutes after the hour.
Balboa Commissary	Leave 10 minutes and 40 minutes after the hour.
Balboa shops	Arrive 15 minutes and 45 minutes after the hour.

FROM BALBOA SHOPS TO ANCON POLICE STATION.

Balboa shops	Leave 15 minutes and 45 minutes after the hour.
Port Captain's Office	Leave 18 minutes and 45 minutes after the hour.
Balboa Commissary	Leave 20 minutes and 50 minutes after the hour.
Administration Building	Leave 25 minutes and 55 minutes after the hour.
Ancon Police Station	Arrive on the hour and half hour.

Route Service Jitney—Cristobal-Mt. Hope.

The following is the schedule of the official jitney service between the Terminal building at Cristobal and Mount Hope. Cars stop at the office of the Commissary Division each way:

Leave Terminal Building.		Leave Mount Hope.	
A. M.	P. M.	A. M.	P. M.
8.00	12.30	8.15	12.45
8.30	1.00	8.45	1.15
9.00	1.30	9.15	1.45
9.30	2.00	9.45	2.15
10.00	2.30	10.15	2.45
10.30	3.00	10.45	3.15
	3.30		3.45

COMMISSARY NOTES.

Kimonos.

Crepe kimonos imported from Japan are selling rapidly in the line stores, another shipment having been distributed this week.

Electric Sewing Machines.

Electric sewing machines received on steamer *Colon* are now on sale in the retail commissaries.

Handkerchiefs.

A shipment of men's linen handkerchiefs has just been received from Ireland and distributed to the line stores. They are now on sale at a price of 33 cents each.

Petticoats.

White silk petticoats, some with hemstitched edge, others with picot edge, are being sold in all commissaries at $3.45 each. This particular number may be had in a plain weave or in a dainty figured pattern and has been supplied in regular and stout sizes.

Important Closing Notice.

All commissaries will be closed on Christmas Day, Saturday, December 25. Formerly, the grocery and cold storage sections in the retail stores have been open from 8 a. m. to 9 a. m. on the first day of a double holiday when the holiday preceded a Sunday and the same hours on the second day of the double holiday when the double holiday followed a Sunday. Hereafter, commissaries will be closed all day on legal holidays.

Books.

Books received:

"The Grand Opera Singers of To-day," "Famous Pianists of To-day and Yesterday," "Famous Singers of To-day and Yesterday," "Famous Violinists of To-day and Yesterday," by Henry G. Lahee; "Sunday Night Suppers," by Christine Terhune Herrick; "The Kindergarten in the Home," by Carrie S. Newman; "The Child of Pleasure," "The Intruder," "The Triumph of Death," "The Maiden of the Rocks," by Gabriel D'Annunzio; "The Correct Thing to do in Society," "Social Customs," "Manners for Boys and Girls," "A Handbook of Hospitality for Town and Country," by Florence Hall; "The Swing in Golf and How to Learn It," by A. Q.; "Iron Cousins," by Mrs. Alfred Sidgwick.

The following titles by Joseph Conrad (in leather edition):

"The Typhoon," "The Rescue," "Victory," "Chance," "Under Western Eyes."

PANAMA RAILROAD PASSENGER TRAIN TIME-TABLE No. 30, EFFECTIVE DECEMBER 26, 1919.

MAIN LINE STATIONS.	DAILY.			Daily except Sat'day	Sat'day only.	Sunday only.
	3	5	7	101	9	11
Leave	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.
Colon	7.10	11.00	5.00	11.15	11.30	9.35
Mount Hope	7.15	11.05	5.05	11.20	11.35	9.40
New Gatun	.....	.....	.....	11.28	11.45	.....
Gatun	7.27	11.17	5.17	11.40	11.49	9.52
					A. M.	
Monte Lirio	7.42	11.32	5.32	11.55	12.04	10.07
				A. M.		
Frijoles	7.53	11.43	5.43	f12.10	12.15	10.18
Darien	8.00	11.50	5.50	f12.18	12.22	10.25
		P. M.				
Gamboa	8.14	12.02	6.02	12.30	12.33	10.37
Summit	8.30	12.14	6.14	f12.42	12.45	10.49
Pedro Miguel	8.44	12.26	6.24	1.00	12.57	11.01
Red Tank	.....	.....	6.26	.....	1.00	11.04
Miraflores Locks	8.50	12.32	6.30	f1.06	1.05	11.09
Corozal	8.54	12.36	6.34	f1.10	1.10	11.14
Balboa Heights	9.00	12.45	6.40	1.15	1.15	11.20
Panama	9.05	12.50	6.45	1.20	1.20	11.25
Arrive	A. M.	P. M.	P. M.	A. M.	A. M.	P. M.
	3	5	7	101	9	11

MAIN LINE STATIONS.	DAILY.			Sat'day only.	Sunday only.	
	4	6	8	10	12	
Leave	A. M.	A. M.	P. M.	P. M.	P. M.	
Panama	7.10	11.00	5.00	11.30	9.35	.....
Balboa Heights	7.15	11.05	5.05	11.35	9.40	.....
Corozal	7.21	11.12	5.10	11.41	9.46	.....
Miraflores Locks	7.26	11.17	5.15	11.46	9.51	.....
Red Tank	7.30	.....	5.19	11.49	9.54	.....
Pedro Miguel	7.34	11.23	5.23	11.53	9.58	.....
				A. M.		
Summit	7.46	11.35	5.35	12.05	10.10	.....
Gamboa	7.58	11.47	5.47	12.17	10.22	.....
Darien	8.07	11.57	5.57	12.28	10.32	.....
		P. M.				
Frijoles	8.14	12.04	6.04	12.35	10.39	.....
Monte Lirio	8.25	12.15	6.15	12.46	10.50	.....
Gatun	8.40	12.30	6.30	1.01	11.05	.....
New Gatun	.....	.....	.....	.....	.....	.....
Mount Hope	8.50	12.40	6.40	1.10	11.15	.....
Colon	8.55	12.45	6.45	1.15	11.20	.....
Arrive	A. M.	P. M.	P. M.	A. M.	P. M.	.....
	4	6	8	10	12	

All trains stop where time is shown except f indicates stop on signal only.

		Sund'y only.	Daily except Sat'y	DAILY.					LAS CASCADAS BRANCH STATIONS.		DAILY.					Daily except Sat'y.	Sat'y. only.		
		43	41	39	37	35	33	31			30	32	34	36	38	40	42		
.....	.....	A. M.	P. M.	P. M.	P. M.	P. M.	A. M.	A. M.	**Leave**	**Arrive**	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	A. M.	.....	.....
.....	.....	12.30	11.30	7.00	4.55	1.35	9.25	6.45	Empire		6.25	9.10	12.55	4.00	6.50	11.23	12.23	.....	.....
.....	.....	12.35	11.35	7.05	5.00	1.40	9.30	6.55	Culebra		6.15	9.05	12.50	3.55	6.45	11.19	12.20	.....	.....
.....	.....	12.45	11.47	7.18	5.13	1.53	9.43	7.07	Paraiso		6.00	8.51	12.35	3.41	6.31	11.06	12.07	.....	.....
.....	.....	12.50	11.50	7.21	5.16	1.56	9.46	7.11	Pedro Miguel		5.56	8.48	12.32	3.38	6.28	11.03	12.04	.....	.....
.....	.....	.....	11.53	7.24	5.19	1.59	9.49	7.14	Red Tank		.....	8.45	12.29	3.35	6.25	11.00	12.01	.....	.....
																	A. M.		
.....	.....	s12.56	f11.57	7.28	5.23	2.03	9.53	7.19	Miraflores Locks		5.49	8.41	12.25	3.31	6.21	10.56	11.56	.....	.....
			A. M.																
.....	.....	1.00	f12.01	7.33	5.28	2.08	9.58	7.24	Corozal		5.44	8.36	12.21	3.26	6.16	10.51	11.51	.....	.....
.....	.....	1.05	12.09	7.40	5.35	2.15	10.05	7.30	Balboa Heights		5.35	8.30	12.15	3.20	6.10	10.45	11.45	.....	.....
.....	.....	1.10	12.15	7.45	5.40	2.20	10.10	7.35	Panama		5.30	8.25	12.10	3.15	6.05	10.40	11.40	.....	.....
.....	.....	A. M.	A. M.	P. M.	P. M.	P. M.	A. M.	A. M.	**Arrive**	**Leave**	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	.....	.....
		43	41	39	37	35	33	31			30	32	34	36	38	40	42		

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates, domestic, $1.00 per year; foreign, $1.50; address The Panama Canal Record, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Volume XIV. Balboa Heights, C. Z., December 29, 1920. No. 20.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending December 25, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Caribbean	Panama Railroad Cattle Industry		December 19		21
Manuel Calvo	Spanish Line		December 19		117
Calamares	United Fruit Co	December 19	December 19	60	½
Arzila	Pacific Steam Navigation Co		December 20		758
Allianca	Panama Railroad Steamship Line	December 19	December 22	1,142½	11
Advance	Panama Railroad Steamship Line	December 19	December 22	1,200	124
Achilles	Panama Railroad Steamship Line	December 19	December 23	12,022½	(3)
[1]Darien	Panama Railroad Steamship Line	December 19	December 23	7,423	(3)
Ucayali	Peruvian Line	December 19		1,642	
Van Renesselaer	Royal Netherlands Steamship Co	December 20	December 21	24	1,226
Cartago	United Fruit Co	December 20	December 22	896	7
Pastores	United Fruit Co	December 21	December 22	743	9
Haarlem	Royal Netherlands Steamship Co	December 21	December 23	145	(3)
Laura C. Hall	Pacific Metals Corporation	December 21		37½	
Atenas	United Fruit Co	December 22	December 22	35	3
Turrialba	United Fruit Co	December 22	December 23	416	50
Peru	Pacific Steam Navigation Co	December 22		532	
Chancellor	Harrison Line	December 22	December 23	880	(3)
Rosana	A. Fait	December 22	December 24	159	19
Acajutla	Pacific Steam Navigation Co	December 23		(2)	587
Caribbean	Panama Railroad Cattle Industry	December 23		350	
Alabama	Texas Oil Co	December 23	December 24	4,229	(3)
Macoris	French Steamship Co	December 23		60	
Manavi	Pacific Steam Navigation Co		December 24		275
Potosi	Pacific Steam Navigation Co	December 24		2,903	
Alexandrian	Leyland Line	December 24		680	
Cuba	Pacific Mail Steamship Co	December 24	December 25	462	(3)
Point Adams	Pacific Mail Steamship Co	December 24		636	
Cauca	Pacific Steam Navigation Co	December 24		446	
Orbita	Pacific Steam Navigation Co	December 24		274	(3)

[1] Barge. [2] Five packages. [3] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending December 25, 1920.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Anyo Maru	Toyo Kisen Kaisha	December 19	December 21		23
Laura C. Hall	Pacific Metals Corporation	December 21	December 22	4.75	
Griffco	James Griffiths & Sons	December 21	December 23		714
Rosana	A. Fait	December 22	December 23	5	
Peru	Pacific Steam Navigation Co	December 22	December 22	28	
Challamba	Pacific Steam Navigation Co	December 22	December 24	379	
Chancellor	Harrison Line	December 23	December 23		979
Lake Filbert	General Steamship Corporation	December 23	December 23	411	
Cuba	Pacific Mail Steamship Co	December 23	December 24	297	
Chile	Pacific Steam Navigation Co	December 25	December 26	17	
Durango	Standard Transportation Co	December 24		[1]3,478	
Cauca	Pacific Steam Navigation Co	December 24	December 24	3	
Griffson	James Griffith & Sons	November 24	December 23		2,023

[1] Diesel oil.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight December 25, 1920.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Stanley Dollar	18	16.02	19	6.24	19	13.59	19	14.55	American	Robert Dollar Line	288.8	44.6	21.5	Baltimore	San Francisco	General	3,068	3,460	2,404
H. H. Asquith	18	15.48	19	8.30	19	15.52	19	16.52	British	Williams & Mordy	390.0	52.5	26.3	Philadelphia	Valparaiso	Coal	6,951	5,692	3,819
Orient City	19	14.46	20	6.15	20	13.38	20	15.45	British	W. R. Smith & Sons	408.0	53.6	15.6	Hull	Portland	Ballast		5,682	4,229
Steel Inventor	19	15.40	20	6.20	20	14.44	20	15.35	American	U. S. Steel Products Co	441.0	56.0	26.8	New York	Los Angeles	General	7,250	7,539	5,448
Arzila	13	21.25	20	7.00	20	14.45	20	16.52	British	Royal Mail Steam Packet Co	285.0	41.3	18.3	Cristobal	Champerico	General	710	2,856	1,797
India Maru	20	6.45	20	7.20	20	15.42	20	16.33	Japanese	Kawaski Steamship Co	385.0	51.0	26.9	Baltimore	Valparaiso	Coal	7,453	5,928	4,381
Simpson No. 221[1]	18	10.03	20	11.15	20	16.50	22	15.45	American	United States Navy	310.0	31.8	11.0	Santiago	San Diego				
Conestoga[2]	15	13.42	21	6.15	21	14.04	21	15.25	American	United States Navy	141.0	29.1	14.6	High seas	San Diego	Coal	52		
America[3]	21		21	7.05	21	8.09			American	J. H. Stilson					Colon	Gatun Lake		7	6
Santa Elisa	21	22.45	22	9.48	22	17.25	22	19.30	American	W. R. Grace & Co	360.3	51.7	25.0	New York	Valparaiso	General	3,419	5,957	4,325
Advance	19	14.00	22	11.10	22	18.50	23	11.45	American	Panama Railroad Steamship Line	295.9	38.4	15.0	New York	Guayaquil	General	437	2,947	2,113
Rio Gatun[3]	20	13.59	22		22	11.50			Panaman	A. R. Echardt					Cristobal	Gatun Lake	Unknown	8	8
Haarlem	21	15.45	23	6.07	23	13.40	23	21.45	Dutch	Royal Netherlands W. I. Mail	361.0	49.0	17.0	Rotterdam	Corral	General	2,424	4,759	3,660
Hampstead Heath	22	20.00	23	6.25	23	15.00	23	17.00	British	Steam Navigation Co. of Canada	450.0	52.5	27.0	Norfolk	Valparaiso	Coal	7,034	6,729	4,828
Julia Luckenbach	23	7.00	23	7.40	23	15.34	23	16.30	American	Luckenbach Line	436.5	57.0	30.6	New York	San Francisco	Steel, general	8,660	8,543	6,427
Chancellor	22	8.55	23	8.30	23	16.13	25	10.50	British	Harrison Line	385.0	52.0	14.0	Liverpool	San Francisco	Ballast		5,370	3,789
Kentucky	23	12.15	23	11.15	23	18.20	23	19.20	British	Ellerman & Bucknall S. S. Co	464.0	56.6	27.6	New Orleans	Dalny	Cotton, steel, etc	9,370	7,825	5,921
Wabana	23	17.27	24	6.22	24	14.04	24	18.32	British	British Chilean Steamship Co	375.0	52.0	25.4	Baltimore	Valparaiso	Coal		5,257	3,374
Bradford	23	20.00	24	6.50	24	15.40	25	8.15	American	Standard Oil Co	428.0	54.6	27.4	Tampico	Pisagua	Crude oil	8,000	7,318	5,458
Minnequa	24	6.00	24	7.40	24	17.21	24	19.45	American	Wessel Duval & Co (S. B.)	390.0	54.2	21.8	New York	Talcahuano	General	4,115	6,106	4,355
Kureha Maru	24	7.15	24	8.27	24	18.12	24	19.30	Japanese	Tatsuma Kisen Kabushiki Kaisha	400.0	53.0	21.8	New York	Korea	Oil and autos	6,951	5,848	4,266
Manavi	18	20.04	24	7.58	24	16.30	24	17.40	British	Pacific Steam Navigation Co	216.0	35.0	12.2	Cristobal	Guayaquil	General	268	1,357	884
Daybreak	23	19.45	24	10.00	24	17.35	24	18.40	British	Claymore Shipping Co	331.0	46.8	19.6	Puerto Mexico	Iquique	Gasoline, etc	3,420	3,688	2,437
Rosana	22	21.12	24	11.17	24	18.17			Costa Rican	Alberto Fait & Co	112.0	25.0	6.0	Cristobal	Puntarenas	General	18	256	185
Pakeha	24	8.33	25	6.10	25	13.24	25	14.35	British	Shaw, Savill & Albion Co	480.0	62.9	23.0	London	Lyttleton	General		2,450	
Grace Dollar	24	6.26	25	6.20	25	14.10	25	15.30	British	Dollar Line	411.6	55.0	21.8	New York	Vancouver	General		5,329	7,118	5,192
San Joaquin	25	2.22	25	6.45	25	16.54	25	17.50	Norwegian	W. Wilhelmsen	425.0	57.6	27.0	Tampico	Taltal	Crude oil		9,300	7,059	5,076
Bellbuckle	24	21.35	25	7.00	25	15.52	26	9.58	American	U. S. and A. Line (S. B.)	395.0	55.0	27.0	New York	Wellington	General		7,600	
Borgland	25	4.25	25	7.40	25	17.58	26	18.50	Norwegian	Peter Olsen	377.0	51.0	26.0	Christiania	San Francisco	Sand and general		7,430	5,274	3,886
Ohioan	25	5.46	25	9.00	25	17.47	25	18.41	American	American-Hawaiian Line	407.7	53.7	26.0	New York	Portland	General		6,000	

[1] Destroyer. [2] Tug and barge *No. 468.* [3] Launch.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

D. A. D. G. 76	19	0.30	19	7.38	19	14.46	20	2.05	British	Glen Line Ltd	480.0	58.2	25.5	Portland	Antwerp	Wheat in sacks	8,037	8,039	5,640
Ucayali	19	7.00	19	8.55	19	16.05			Peruvian	Peruvian Line	374.7	46.3	21.6	Callao	Cristobal	General	1,642	4,466	2,405
Rio Grande	19	8.53	19	9.27	19	17.55	19	19.35	Norwegian	Det. Nordenfieldske S. S. Co	360.3	52.1	24.5	Caleta Colosa	Savannah	Nitrates	6,500	5,137	3,767
Shropshire	19	15.45	20	6.35	20	15.02	20	20.15	British	Federal Steam Navigation Co	526.4	61.4	28.0	Sydney	Liverpool	Frozen, general	7,840	12,275	8,918
Mamari	20	5.00	20	8.08	20	16.10	20	18.55	British	Shaw, Savill & Albion Co	455.4	56.4	24.0	Port Chalmers	London	Frozen, general	4,466	8,641	6,017
Lake Maurepas	20	1.15	20	8.32	20	17.10	21	6.48	American	Wessel Duval & Co. (S. B.)	253.5	43.5	18.6	Mejillones	Savannah	Nitrates	2,660	2,383	1,517

Aviles	20	19.00	21	7.30	21	14.55	21	17.38	Spanish	Cia. Gen'l. de Nav. de Bilb	370.0	41.2	23.0	Mejillones	Bilbao	Nitrates	4,010	3,731	2,581
Karamea	20	22.00	21	7.53	21	16.10	21	23.47	British	Shaw, Savill & Albion Co	420.0	54.0	20.6	Wellington	London	General	3,890	7,106	5,073
Sisak	21	9.50	21	11.40	21	23.30			German	Kosmos Line	400.0	52.1	21.1	Caleta Buena	Cristobal[7]	Nitrates	5,315		
St. Enoder[4]	21	9.50	21	11.53	21	18.18			British	British Admiralty	135.0	29.1	14.0	Caleta Buena	Cristobal[7]	Ballast		438	114
Laura C. Hall[5]	21	7.15	21	12.30	21	19.55	26	8.02	British	Pacific Metals Corp	81.0	25.6	10.0	Buenaventura	Cristobal	([8])	37	130	69
Faith[3]			21		21				American	A. E. Snider				Balboa	Gatun Lake				
Sherman	21	19.20	22	6.29	22	14.40	22	15.10	American	Sherman Steamship Co	400.3	45.3	26.0	San Antonio	Norfolk	([9])	6,257	5,007	3,492
Coalinga	21	18.30	22	7.40	22	15.07	22	20.15	American	Union Oil Co	471.0	55.0	22.0	Tocopilla	Tampico	Ballast		8,108	5,877
Santa Teresa	22	3.30	22	8.31	22	15.30	22	16.13	American	W. R. Grace & Co	360.2	51.6	24.0	Valparaiso	New York	Nitrate, general	2,950	5,726	4,086
Peru	22	0.35	22	9.44	22	16.52			British	Pacific Steam Navigation Co	350.0	43.1	15.5	Valparaiso	Cristobal	General	532	4,095	2,655
Wollowra	22	6.00	22	9.45	22	17.25	23	16.50	Chinese	Chin Van Chee	323.0	40.3	19.0	Hongkong	Habana	Rice	500		
Bachi	22	10.35	22	11.58	22	19.48	22	21.50	Spanish	Hijos de Astigarraga	331.2	46.7	21.0	Caleta Colosa	Azores[7]	Nitrates	4,621	3,740	2,121
Rosana[6]	21	23.00	22	12.27	22	21.12	24	11.17	Costa Rican	Alberto Fait	112.0	25.0	7.0	Puntarenas	Cristobal	Logs and wood	159	256	185
Nanerie	22	10.35	22	12.20	22	21.25	23	1.15	British	Andrew Weir & Co	430.6	49.0	26.6	Mejillones	Ghent	Nitrates	7,500	6,369	4,937
Auldmuir	22	13.25	22	14.35	22	22.35	23	8.50	British	Glen Steamship Co. of Glasgow	314.5	47.2	16.7	San Antonio	Baltimore	Copper	3,046		
Tymeric	23	2.00	23	8.15	23	15.50	23	17.58	British	Andrew Weir & Co	400.1	52.3	25.0	Antofagasta	Dunkirk	Nitrates	7,216	6,111	4,562
Apple Branch	23	21.00	24	7.53	24	15.20	24	18.50	British	Nautilus Steam Shipping Co	370.0	51.7	24.0	Talcahuano	United King	General	5,900	5,112	3,511
Cuba	23	21.30	24	9.44	24	16.20	25	12.17	American	Pacific Mail Steamship Co	307.7	42.3		San Francisco	Baltimore	General	878	3,429	2,206
Cauca	24	10.15	24	10.54	24	17.32			British	Pacific Steam Navigation Co	246.0	35.2	12.6	Guayaquil	Cristobal	([10])	446	1,185	1,023
Endicott	24	13.15	24	14.02	24	21.55	24	22.55	American	Admiral Line (S. B.)	402.6	54.8	27.0	Tacoma	United King	Wheat	7,481		
Eastern Mariner	19	4.52	25	6.43	25	14.35	25	14.35	American	Thorndyke, Trenholme & Co., S.B	415.1	55.7	27.3	Tacoma	Antwerp	Wheat	7,699		
Eagle	24	17.30	25	7.25	25	14.42	25	14.42	American	Standard Transportation Co	410.0	56.0	18.0	San Francisco	New York	Ballast			
Gen. W. C. Gorgas	25	2.00	25	8.15	25	16.08			American	Panama Railroad Steamship Line	370.2	45.3	20.6	Guayaquil	New York	([11])	1,296	5,034	3,411
Oregonian	25	10.30	25	11.14	25	18.24	25	18.24	American	United American Line	406.8	51.1	24.6	Seattle	New York	Lumber, general	([12])	5,903	4,135

[4] Tug. [5] Motor schooner. [6] Motor ship. [7] For orders. [8] Platinum, coffee, and books. [9] Copper, nitrates, and tin ore. [10] Ivory nuts, coffee, and general. [11] Coffee, cocoa, and general. [12] General, 801 tons; lumber, 3,262,002 feet B. M.

Hours are expressed on the 24 hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
December 19.	Calamares	United Fruit Co	Port Limon.
December 19.	Allianca	Panama Railroad Steamship Line	New York via Haiti.
December 19.	Achilles[13]	Panama Railroad Steamship Line	Norfolk.
December 20.	Van Rensselaer	Royal Netherlands W. I. Mail	Amsterdam.
December 20.	Cartago	United Fruit Co	New Orleans.
December 21.	Redwing[14]	United States Navy	Norfolk.
December 21.	Pastores	United Fruit Co	New York via Habana.
December 22.	Ajax[4]	Curacao Petroleum Co	Curacao.
December 22.	Turrialba	United Fruit Co	New York via Kingston.
December 23.	Alabama	Texas Oil Co	Port Arthur.
December 23.	Caribbean	Panama Railroad Cattle Industry	Cartagena.
December 23.	Macoris	French Line	St. Nazaire and wayports.
December 24.	Alexandrian	Leyland Line	Liverpool via wayports.

*DEPARTURES.

Date.	Vessel.	Line.	For—
December 19.	Calamares	United Fruit Co	New York via Habana.
December 19.	Caribbean	Panama Railroad Cattle Industry	Cartagena.
December 19.	Manuel Calvo	Spanish Line	Puerto Colombia.
December 20.	Cambrai[15]	United States Army	San Juan.
December 21.	Van Rensselaer	Royal Netherlands W. I. Mail	Cartagena.
December 22.	Allianca	Panama Railroad Steamship Line	Cartagena.
December 22.	Pastores	United Fruit Co	Port Limon.
December 22.	Atenas	United Fruit Co	New Orleans.
December 22.	Cartago	United Fruit Co	New Orleans via Bocas del Toro and Habana.
December 23.	Achilles[13]	Panama Railroad Steamship Line	Norfolk.
December 23.	Turrialba	United Fruit Co	New York via Colombia and Kingston.
December 23.	Redwing[4]	United States Navy	Norfolk via Cuba.
December 24.	Alabama	Texas Oil Co	Tampico.

[13] And barge *Darien*. [14] Tug and barges. [15] Transport.

(Continued on page 279, column 2.)

Ships at Canal Repair Shops.

The following vessels were at the Canal shops for repairs during the week ended December 27:

Balboa shops.—Barges *Nos. 134* and *135*, general repairs; steamship *Marne*, general repairs and rebuilding; dredge *No. 84*, general repairs; launch *Captain Wilhelm*, hull repairs and installation of new engine; tug *Bohio*, general repairs and rebuilding; launch *Limon*, general repairs and overhauling; steamship *Olockson*, pumping out and trimming ship; launches *Pilot*, repairs to hull; *Santa Rita*, rebuilding; submarine *R-24*, periodical overhaul; U. S. S. *Cleveland*, miscellaneous minor repairs to machinery; schooner *Astoria*, small miscellaneous repairs to engine and crank shaft; supply boat *No. 2*, cleaning cylinders; motor tug *Gaithur*, miscellaneous repairs to engine; mine yawl *101*, hull repairs and overhauling of engine; steamships *Advance*, installation of doubler on starboard bow; *Griffco*, manufacture 3 springs; U. S. S. *Simpson*, *No. 221*, calking bulkhead; tug *Genesee*, miscellaneous minor repairs; steamships *Ardmore*, heavy engineer's department repairs; *Lake Ellijay*, repairs to windlass; *Eastern Mariner*, miscellaneous engineer's department repairs; *Brave Coeur*, repairs to telemotor stand; U. S. S. *Frederick*, overhauling of refrigerating machine; steamship *Grelcaldy*, hull repairs.

Cristobal shops—Steamship *General W. C. Gorgas*, miscellaneous repairs to engine, deck, and steward departments; tug *Ajax*, test crank and thrust shafts; repair boiler, capstan, piping, etc.; steamship *Caribbean*, scale boilers and renew ammonia coil; tug *St. Enedor*, repair stanchions and beading, install lines on main engine, etc.; steamship *Grace Dollar*, repair telemotor; *Potosi*, repair piping and port lights; U. S. S. *McCormick*, weld manifold; steamships *Jamaica*, repair anchor windlass; *Chile*, repair boilers, overhaul steering engine, etc.; U. S. S. *Whippoorwill*, repair boilers, valves, and auxiliaries; steamships *Apalachee*, repair hull, stern tube, etc.; *Karamea*, repair injector pipe; tug *Engineer*, miscellaneous repairs to boiler, engine, and auxiliaries; steamships *Pastores*, *Wollowra*, *Peru*, *Essequibo*, *Cartago*, *Macoris*, and *Point Adams*, U. S. S. Eagle *No. 32*, and steamship *Cuba*, minor repairs.

Las Cascadas Branch Line Railway Service to be Discontinued.

Effective with the arrival of train No. 43 from Las Cascadas at Panama at 1.10 a. m., January 2, 1921, the Panama Railroad freight and passenger service over the Las Cascadas branch line will be discontinued.

This will not affect for the present the schedule of the main line. A new time table is in preparation, to go into effect about January 9, with minor changes. The times of departures of trains from both terminals are to remain the same, but with stops at Fort Clayton, Red Tank, and Fort Davis, the time for crossing the Isthmus on the 3 daytime trains each way daily will be increased by about 5 minutes. No changes in the Fort Randolph branch line service are contemplated.

Since the opening of the Canal, the Las Cascadas branch, crossing the Canal on a swinging pontoon bridge at Paraiso, has been operated primarily for the benefit of the Army forces stationed in the abandoned Canal villages of Empire and Culebra. With the completion of the new permanent posts on the east side of the Canal it has been possible to reduce the troops on the west side to such an extent that the Army can provide its transportation by motor over the road extending from Las Cascadas to Pedro Miguel and Miraflores locks. It is understood that passengers to or from the west side will walk across the lock gates at Pedro Miguel and that freight will be handled by boat from a siding near the north end of the Miraflores tunnel, across Miraflores Lake to a landing on the west shore.

The Keeping of Poultry in the Canal Zone.

In preparation for Thanksgiving and Christmas dinners, numbers of employees of the Canal living in Canal quarters secured live turkeys from Panama and fattened them at their quarters. This experience

has caused a number of requests for the permanent privilege of keeping poultry, which the Chief Health Officer has to deny. He has requested the republication of the following:

Regulations and Information Concerning the Keeping of Fowls, Small Animals, Etc., in the Canal Zone.

a. BOARD OF HEALTH ORDINANCE NO. 7:

Be it ordained by the Board of Health of the Canal Zone:

SECTION 1. It shall be unlawful for any persons to keep within the limits of the Canal Zone any live hares, rabbits, guinea pigs, monkeys, squirrels, chickens, turkeys, geese, ducks, or other small animals or fowls, without a permit therefor issued by the Board of Health or otherwise than in accordance with the terms of said permit and regulations of said Board.

SEC. 2. The fowls and animals referred to in Section 1 shall not be kept in any building which is not rat-proof in the manner provided by law for the rat-proofing of buildings, unless same are kept in a rat-proof coop.

SEC. 3. Within the area embraced in the limits of the Canal Zone towns, said coops shall be portable and elevated at least two feet from the ground.

SEC. 4. All food for such fowls and animals shall be kept in closed metal receptacles so constructed that the contents shall be inaccessible to rats, and within town limits no such food shall be thrown or scattered on any floor, area, or open space, but shall be placed only in coops hereinbefore provided for.

The foregoing ordinance was duly adopted at a meeting of the Board of Health of the Canal Zone held at Balboa Heights, Canal Zone, on the 20th day of December, 1915.

(*b*) This ordinance was enacted as an anti-plague measure. Bubonic plague is primarily a disease of rats and secondarily a disease of man, being conveyed to man by the fleas which rats harbor. The Canal is in close communication with many countries in which rat plague is epidemic. It is highly important, not only for residents of the Zone, but for the commerce which passes through the Canal, that the Zone be kept free from infection by rats which have plague. This can be accomplished by banishing rats from the Zone and preventing the landing of rats from ships.

(*c*) The purpose of this ordinance is to prevent the keeping of small animals and fowls mentioned therein and of food intended for them, under conditions which would allow rats to gain access either to the animals or the food.

(*d*) Young chickens, chicken food, and eggs are well known to afford food for rats and ordinary chicken coops are favorite rendezvous for them. The Panama Canal has expended large sums of money in rat-proofing its wharves and buildings, and it is only reasonable that employees should not be allowed to maintain conditions which harbor rats. Therefore, permission to keep chickens, small animals, etc., is granted only under conditions which do not favor sheltering or feeding of rats.

(*e*) Chickens, to be healthy, require earth runways in which they can scratch. They dig holes in these runways which accumulate water and afford breeding places for mosquitoes. To prevent this, the runways require frequent inspection by Sanitary Inspectors and thereby become a constant source of expense to the Government. Therefore, runways for fowls can not be permitted within the limits of Canal Zone towns. As it is impracticable to keep fowls for any considerable period of time without providing a runway for them, this prohibits the keeping of fowls in towns except for short periods of time before they are required for food. When so kept, they shall be confined in coops as provided in Section 3, Ordinance No. 7.

(*f*) Chickens frequently harbor vermin and their coops should therefore be kept at a suitable distance from human habitations. Chicken coops, animal cages, parrot perches, etc., even when they comply with sanitary requirements, are often unsightly and therefore offensive in a neighborhood. Further, the noise made by fowls and small animals is usually objectionable to the neighbors of their owner. Chicken coop doors are frequently left open and the chickens scratch up the gardens and flower beds of the neightborhood before they can be driven back into the coop, and this results in a multitude of complaints. For these reasons permits to keep chickens within town limits are issued only for a period of a few days for fattening before eating, and this permission is conditioned on the acquiescence of the District Quartermaster in regard to those features which concern his department.

(*g*) Outside of town limits fowls may be kept in rat-proof buildings of approved construction, and runways may be provided.

(*h*) Action on permits to keep fowls other than chickens, including parrots, and small animals, will be based on the provisions that have been made for keeping them, proximity to other quarters, and location where they are to be kept.

Lines to Guide Traffic at Street Corners and Curves.

In order to minimize the danger of collisions between vehicles at corners and curves of streets in the Ancon-Balboa district, the Division of Municipal Engineering has painted 4-inch white guide lines on the surface of the roadway at such places. The line begins in the center of the road at a point well beyond the beginning of the curve, and extends to the corresponding tangent beyond the curve. Drivers are required to keep to the left of the line while passing it, except at cross roads and T-junctions, where additional lines indicate the track to be followed in crossing over the line to make the turn in the opposite direction.

The Chief of Police advises that the guide lines indicate the track required to be followed under the present road rules and are for the protection of the public and particularly in the interest of motor vehicle operators.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights (telephone 286):

Attorney examiner of finance, $3,600 to $5,000 a year; assistant attorney examiner of finance, $2,400 to $3,480 a year; form 1312; announcement No. 28; age, 25 but not 55 years; vacancies exist in the Bureau of Finance, Interstate Commerce Commission; January 19-20, 1921. (Male and female.)

Bookkeeper (male and female); $1,000 a year; form 304; age, 18 but not 55 years; vacancies exist in the Departmental Service, Washington, D. C.; January 19, 1921.

Cheese maker (male and female); $1,500 to $1,980 a year; form 1312; age, below 40 years; vacancies exist in the Bureau of Animal Industry, Department of Agriculture; January 19, 1921.

Immigrant inspector (male and female); $1,380 a year; form 1312; announcement No. 26; age, 20 but not 55 years; vacancies exist in the Immigration Service, Department of Labor; January 19, 1921.

Investigator in marketing fruits and vegetables, $1,800 to $2,760 a year; assistant in marketing fruits and vegetables, $1,200 to $1,800 a year (male and female); form 2118; announcement No. 493-amended; age, 21 but not 45 years; vacancies exist in the Bureau of Markets, Department of Agriculture, Washington, D. C.; April 5, 1921.[1]

Junior engineer and deck officer (male and female); $2,000 a year; form 1312; announcement No. 383-amended; age, 26 years and over; vacancies exist in the United States Coast and Geodetic Survey; February 9-10 and April 13-14, 1921.

Senior dairy herdsman (male and female); $1,500 a year; form 1312; announcement No. 12; age, not over 45 years; a vacancy exist in the Bureau of Animal Industry, Department of Agriculture, Jeanerette, La.; January 11, 1921.[1]

Associate chemist, $2,500 to $3,600 a year; assistant chemist, $1,800 to $2,500 a year; junior chemist, $1,200 to $1,800 a year (male and female); form 2118, announcement No. 2236-amended; age, within reasonable age limits; vacancies exist in the Federal Classified Service, Washington, D. C.[2]

Assistant gas inspector, $2,000 to $2,400 a year (male and female); form 2118; announcement No. 35; age, 20 but not 45 years; vacancies exist in the Osage Indian Agency, Oklahoma; January 25, 1921.[1]

Assistant in boys' and girls' club work, $2,500 to $3,300 (male and female); form 2118; announcement No. 36; age, below 45 years; vacancies exist in the States Relations Service, Department of Agriculture, Washington, D. C., January 25, 1921.[1]

Radio engineer, $3,000 to $4,800 a year; age, 25 to 50 years; assistant radio engineer, $2,000 to $3,000 a year; age, 22 to 40 years; radio laboratory assistant, Grade 1, $800 to $1,200 a year; Grade 2, $1,200 to $2,000 a year; age, 18 to 30 years; form 2118; (male and female); announcement No. 38; vacancies exist in the Signal Service at Large, War Department; April 5, 1921.[1]

Laboratory aid in soil bacteriology, $840 to $1,200 a year (male and female); form 304; announcement No. 40; age, 18 but not 45 years; vacancies exist in the Bureau of Plant Industry, Department of Agriculture, Washington, D. C.; February 9, 1921.

Photostat operator, $1,000 a year (male and female); form 1312; announcement No. 34; age, 18 but not 55 years; vacancies exist in the Bureau of Chemistry, Department of Agriculture, January 25, 1921.[1]

Plate printer, $900 to $1,200 a year (male and female); form 1800; announcement No. 39; age, 20 but not 50 years; vacancies exist in the Hydrographic Office, Navy Department, Washington, D. C.; January 25, 1921.[1]

Transitman, $120 to $200 a month (male and female); form 1312; announcement No. 33; age, 20 but not 45 years; vacancies exist in the General Land Office Service; February 9, 1921.

Law clerk and typist (male and female); $1,400 to $1,740 a year; forms 304 and 2226; announcement No. 27; age, 18 but not 55 years; vacancies exist in the Bureau of Naturalization, Department of Labor, Washington, D. C., January 19, March 23, and May 4, 1921.

Oiler (male and female); $840 a year; form 1800; announcement No. 32; age, 18 but not 50 years; vacancies exist in the Post Office Department, Washington, D. C.; January 25, 1921.[1]

Photographer, $1,400 to $1,800 a year; assistant photographer, $1,110 to $1,400 a year; photographic laboratory aid, $900 to $1,100 a year (male and female); form 1312; age, 18 but not 55 years; vacancies exist in Departmental Service, Washington, D. C.; February 9, 1921.

Specialist in tropical agronomy (male and female); $1,800 to $2,500 a year; form 2118; age, below 55 years; vacancies exist in the States Relations Service, Department of Agriculture, Hawaii; February 1, 1921.[1]

Translator (male and female); $1,800 a year; form 1312; age, 18 but not 55 years; vacancies in the War Department, Washington, D. C.; February 9, 1921.

Electrician, $840 to $2,000 a year; form 1800; elevator conductor, $720 to $900 a year; form 1800; general mechanic, $720 to $1,000 a year; forms 1800 and 2029; steam engineer, 1st and 2d class, $1,000 to $1,200 a year; 3d class, $600 to $1,000 a year (male and female); announcement No. 231-amended; age, 18 but not 50 years; vacancies exist in the Departmental Service, Washington, D. C., and Indian Service.[2]

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[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

[2] Nonassembled. Applications will be received at any time until further notice.

Official Circulars.

Appointment.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 24, 1920.

CIRCULAR No. 661-94:

1. Mr. Frank M. Sawyer is hereby appointed Deputy Collector of The Panama Canal. He will act for the Collector of The Panama Canal during such periods as he may be designated by the Governor of The Panama Canal to perform the duties of the Collector during the Collector's absence or disability.

2. Before authority is given him to act for the Collector, the required stipulation and consent agreements must be executed by the surety on the bond of the Collector.

JAY J. MORROW,
Acting Governor.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., December 21, 1920.

CIRCULAR No. 274:

Effective December 18, 1920, Mr. D. E. Wright is designated an accountable official of The Panama Canal, *vice* Mr. G. W. Green, and as such will account for all nonexpendable property in use by the Division of Municipal Engineering.

ELWYN GREENE,
Acting Auditor, The Panama Canal.

Approved:
JAY J. MORROW,
Acting Governor.

Employees Excused on Christmas Eve and New Year's Eve.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 22, 1920.

MEMORANDUM FOR HEADS OF DEPARTMENTS AND DIVISIONS:

The Acting Governor states that heads of departments and divisions may excuse employees whose services can be spared after 1 p. m. Christmas Eve and New Year's Eve. Monthly employees so excused will not suffer loss of pay for the above days and hourly employees will be paid for time worked only, as law will not permit otherwise.

C. A. MCILVAINE,
Executive Secretary.

Shipping Commissioner's Sale.

The Shipping Commissioner, room 305, Administration Building, Balboa Heights, will accept written bids up to noon, Monday, January 10, 1921, for the purchase of the personal effects belonging to the estate of Ildeston Jorgensen, deceased American seaman. Itemized lists of the articles offered for sale will be found posted at the Canal Zone customs offices, post offices, and clubhouses, and persons desiring to examine the effects should apply to the Shipping Commissioner's office on any business day. Bids may be made for the entire lot of the effects, or be limited to individual articles, and should be submitted in sealed envelopes, addressed to the Shipping Commissioner, marked "Bid on effects of Ildeston Jorgensen, deceased." The right is reserved to reject any and all bids, and no advance deposit of money is required.

Additions to Commissary Stock.

Dry Goods Section.

Handkerchiefs, linen, Irish, embroidered, ea.	$0.35
Handkerchiefs, cotton, Irish, embroidered, ea.	.13
Handkerchiefs, cotton, Irish, embroidered, ea.	.16

MOVEMENTS OF OCEAN VESSELS.—Continued from page 275.

PORT OF BALBOA.

*ARRIVALS.

Date.	Vessel.	Line.	From—
December 19.	Anyo Maru	Toyo Kisen Kaisha	Valparaiso.
December 21.	Grifco	James Griffiths & Son	Callao.
December 22.	Challamba[6]	Pacific Motorship Co.	San Antonio.
December 23.	Lake Filbert	General Steamship Corp. (S. B.)	Seattle.

*DEPARTURES.

Date.	Vessel.	Line.	For—
December 21.	Anyo Maru	Toyo Kisen Kaisha	Hongkong.
December 24.	Challamba[6]	Pacific Motorship Co.	San Francisco.
December 24.	Griffco	James Griffiths & Son	San Francisco.
December 24.	Griffson[16]	James Griffiths & Son	San Francisco.
December 25.	Lake Filbert	General Steamship Corp. (S. B.)	Callao.

[16] Barge.

*Other than ships passing through the Canal.

Locations of Patients, and Visiting Hours, at Ancon Hospital.

The following table shows the distribution of patients in the new Ancon Hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Present number of beds.	Visiting hours.
Section "A"—White American, male:		Tuesdays, Thursdays, and Saturdays, 2 to 4.30 p. m. and 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11 a. m. and 2.30 to 4.30 p. m.
Ward No. 1, Medical, Eye and Ear	44	
Ward No. 2, Medical, Eye and Ear	41	
Ward No. 3, Surgical	44	
Ward No. 4, Surgical	41	
Cells (2)	2	
	172	
Section "B":		
White American, female	23	Daily except Sunday, 2 to 4.30 p. m.; 6.30 to 8 p. m. Sundays and holidays, 10 to 11 a. m.; 2 to 4.30 p. m. 6.30 to 8 p. m.
White foreign, female	15	
Nursery	16	No visitors permitted.
Private rooms (40)	40	Daily, 9.30 to 11 a. m.; 2 to 4.30 p. m.; 6.30 to 8 p. m.
Cells (2)	2	
	102	
Section "C":		
Ward No. 9, White foreign, male	39	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 10, Colored, eye and ear, convalescent medical	39	
Ward No. 11, Colored Acute surgical	39	
Ward No. 12, Colored Acute medical	39	
Ward No. 13, Colored Convalescent surgical	39	
Ward No. 14, Colored Convalescent surgical	39	
Cells (6)	6	
Rooms (7)	7	
	247	
Section "D":		
Ward No. 15	41	
Ward No. 16	39	
Ward No. 17, Colored children	32	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 18, White children	30	Daily, 9.30 to 10 a. m.; 2 to 4 p. m.
Ward No. 19, Colored female medical	41	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 20, Colored female surgical	34	
Rooms (3)	6	
Cells (6)	6	
	229	
Isolation:		No visitors permitted.
Floor No. 1	14	
Floor No. 2	29	
Floor No. 3	23	
Floor No. 4	28	
	99	
Total number of beds	849	

Emergency passes are issued only by and in the discretion of the section nurse.

COMMISSARY NOTES.

Music.

A shipment of the latest popular sheet music, including numbers from musical productions now current in New York, has been received and is on sale in the line stores.

Closed for Inventory.

The retail commissaries will be closed for quarterly inventory all day on Tuesday, January 4, and the morning of Wednesday, January 5. The cold storage and grocery sections will be open Wednesday afternoon at the regular hour and other departments as soon thereafter as check has been completed by the inspectors.

Books.

Books received:

"Zone Policeman 88," by Harry Frank; "Poor Wise Man," by Mary Roberts Rinehart; "Lady Lillith," by Stephen McKenna; "The Adventurous Lady," by J. C. Snaith; "The Valley of Silent Men," by James Oliver Curwood; "The Top of the World," by Ethel M. Dell; "The Prairie Mother," by Arthur Stringer; "I've Married Marjorie," by Margaret Widdemer; "Harriet and The Piper," by Kathleen Norris.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Volume XIV. Balboa Heights, C. Z., January 5, 1921. No. 21.

Commercial Traffic in 1920 Exceeded That in Any Previous Year.

Traffic through the Panama Canal during the calendar year 1920 reached a new high record. The commercial ships passing through the Canal during the 12 months numbered 2,814, as compared with 2,478 during the fiscal year ending June 30, 1920, and 2,134 during the calendar year 1919. The gain was 13.56 per cent in ships over the fiscal year 1920 and 31.87 per cent over the calendar year 1919. There were 336 more vessels making the transit in commercial service in the calendar year 1920 than in the fiscal year, and 680 more than in the calendar year 1919. The fiscal year ending June 30, 1920, was the previous record period of 12 months of operation.

The Panama Canal net tonnage of the commercial vessels in the calendar year 1920 aggregated 10,378,265 tons, as compared with 8,546,044 net tons in the fiscal year 1920 and 6,919,149 net tons in the calendar year 1919. The gain was 1,832,221 tons, or 21.44 per cent, over the fiscal year; and 3,459,116 tons, or 49.99—practically 50—per cent over the calendar year 1919.

The tolls levied during the year aggregated $10,295,392.96, as compared with $8,513,933.15 in the fiscal year ending June 30, 1920, and $6,992,218.39 in the calendar year 1919. This was a gain of $1,781,459.81, or 20.92 per cent, over the fiscal year 1920, and $3,303,174.57, or 47.24 per cent, over the calendar year 1919.

The cargo carried through the Canal by the commercial vessels aggregated 11,236,119 tons of 2,240 pounds. The cargo in the fiscal year 1920 was 9,374,499 tons, and in the calendar year 1919 it was 7,468,167 tons. The gain was 1,861,620 tons, or 19.86 per cent, over the fiscal year 1920, and 3,767,952 tons, or 50.47 per cent, over the calendar year 1919.

In summary, the gain over the fiscal year ending June 30, 1920, was: Vessels, 13.6; net tonnage, 21.4; tolls, 20.9; and cargo, 19.9 per cent. Over the calendar year 1919 the gain was: Vessels, 31.9; net tonnage, 50; tolls, 47.2; and cargo, 50.5 per cent.

Steamer Aground on West Breakwater at Cristobal.

The cargo steamship *Sussex* of the Federal Steam Navigation Company's service, bound from St. John's, New Brunswick, to New Zealand ports, ran aground on the west breakwater about 180 feet from the entrance to Cristobal harbor at 10.25 p. m., January 3. She had not taken on a pilot. Canal tugs and the salvaging vessel *Favorite* went to her assistance immediately and have since been engaged in trying to ease her off the rocks. It is hoped that she can be pulled off after the cargo has been discharged from the No. 2 hold, after which she is to go through the Canal to be repaired in the dry dock at Balboa. She is considerably damaged in the forepeak.

The *Sussex* is 420 feet in length by 54 feet beam, of 6,930 gross and 5,126 net tons. She was loaded with about 11,000 tons of general cargo. Approximately 200 tons have been taken out of the No. 1 hold.

CANAL WORK IN NOVEMBER.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of November, 1920:

BALBOA HEIGHTS, C. Z., December 24, 1920.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of The Panama Canal for the month of November, 1920:

CANAL TRAFFIC.

The number of ocean-going commercial ships passing through the Canal during the month was 238, in addition to which there were 16 United States Government vessels, as follows: Six tugs, 3 colliers, 2 fuel ships, 1 Navy cargo ship, 1 Army transport, 1 destroyer, 1 submarine, and 1 ammunition ship. A detailed classification of the month's traffic is included with this report.

The Panama Canal net tonnage of the 238 commercial vessels aggregated 929,875 tons, being 5,704 tons less than for the preceding month. Their registered gross tonnage was 1,184,072, and registered net, 756,223 tons. The total cargo carried by the above vessels was 984,910 tons of 2,240 pounds, being 6,156 tons less than the preceding month. Of this total, 5,061 tons were carried as deck cargo.

The total number of vessels and craft of all kinds through the Canal was 258, as compared with 271 for last month. The total tolls earned were $933,926.51, as compared with $911,854.58 for October. Ocean-going commercial ships passing through the Canal averaged 7.9 per day, and the average tolls per vessel, $3,924. Tolls collected amounted to $933,926.51.

The average tonnage, Panama Canal measurement, for commercial vessels, was 3,907; United States net equivalent, 3,218; registered gross, 4,975; and registered net, 3,177. The average cargo carried by the laden vessels was 4,804 tons.

The United States coastwise trade for November included 29 vessels with a total Panama Canal net tonnage of 107,955, and cargo of 92,723 tons. There were 19 vessels from the Atlantic to the Pacific with a total tonnage of 69,247, and cargo of 51,454 tons; and 10 vessels from the Pacific to the Atlantic, with a total tonnage of 38,708, and cargo of 41,269 tons.

PRINCIPAL COMMODITIES.

Bulk shipments of the different principal commodities included in the November traffic were:

FROM ATLANTIC TO PACIFIC.

Commodity.	From—	To—	No. of cargoes.	Tons.	Total tons.
Coal and coke	Charleston	Valparaiso	1	8,394	.....
Coal and coke	Baltimore	Valparaiso	1	3,770	.....
Coal and coke	Norfolk	Valparaiso	1	2,401	14,565
Coal and coke	Norfolk	Iquique	2	16,500	16,500
Coal and coke	Norfolk	Mejillones	1	9,321	.....
Coal and coke	Savannah	Mejillones	1	4,443	13,764
Coal and coke	Norfolk	Arica	1	5,563	.....
Coal and coke	Newport News	Arica	1	3,049	8,612
Coal and coke	Norfolk	Antofagasta	1	4,019	.....
Coal and coke	Boston	Antofagasta	1	3,285	7,304
Coal and coke	Baltimore	San Antonio	1	3,081	3,081
Coal and coke	United States	Chilean ports	12	63,826	63,826
Coal and coke	Newport News	Callao	1	4,030	4,030
Coal and coke	Norfolk	Mollendo	1	2,735	2,735
Coal and coke	Norfolk	Port Chalmers	1	6,007	6,007
Coal and coke	Liverpool	Callao	1	4,762	4,762
Coal and coke	New York	Santa Cruz, Argentine	1	2,700	2,700
Coal and coke	.....	.....	17	84,060	84,060
Fuel oil	Tampico	Tocopilla	2	18,000	18,000
Fuel oil	Tampico	Pisagua	1	7,100	7,100
Fuel oil	Tampico	Antofagasta	1	9,300	9,300
Fuel oil	Tampico	Iquique	1	9,500	9,500
Fuel oil	Puerto Lobos	Pisagua	1	9,300	9,300
Fuel oil	Mexico	Chilean ports	6	53,200	53,200
Fuel oil	Tampico	Los Angeles	1	11,000	11,000
Fuel oil	Tampico	San Francisco	1	9,000	9,000
Fuel oil	.....	.....	8	73,200	73,200

FROM ATLANTIC TO PACIFIC—continued.

Commodity.	From—	To—	No. of cargoes.	Tons.	Total tons.
Refined oils	Philadelphia	Manila	1	9,906	9,906
Refined oils	Port Arthur	Woo ung	1	8,807	8,807
Refined oils	Port Arthur	Adelaide	1	5,800	5,800
Refined oils	New York	Melbourne	1	3,214	3,214
Refined oils			4	27,727	27,727
Sulphur	Sabina	Melbourne	1	6,150	6,150
Sulphur	Galveston	Sydney	1	5,250	5,250
Sulphur	Sabine	Adelaide	1	5,170	5,170
Sulphur			3	16,570	16,570
Steel and iron	New York	W. coast, North America	1	7,000	7,000
Steel and iron	Baltimore	Los Angeles	1	3,240	3,240
Steel and iron	Philadelphia	Seattle	1	1,200	1,200
Steel and iron			3	11,440	11,440

FROM PACIFIC TO ATLANTIC.

Nitrate	Valparaiso	Norfolk	1	7,700	.....
Nitrate	Mejillones	Norfolk	1	5,418	.....
Nitrate	Caleta Buena	Norfolk	1	4,090	.....
Nitrate	Iquique	Norfolk	1	3,090	20,208
Nitrate	Iquique	Savannah	1	11,300	.....
Nitrate	Caleta Colosa	Savannah	1	4,220	15,520
Nitrate	Mejillones	Pensacola	1	9,529	9,529
Nitrate	Mejillones	Charleston	1	8,477	8,477
Nitrate	Pisagua	Newport News	1	7,500	7,500
Nitrate	Caleta Buena	Hampton Roads	1	5,700	5,700
Nitrate	Iquique	Wilmington	1	3,700	3,700
Nitrate	Taltal	United States	1	3,702	3,702
Nitrate	Chile	United States	12	74,336	74,336
Nitrate	Iquique	Spain	2	9,970	9,970
Nitrate	Taltal	Spain	1	6,500	6,500
Nitrate	Mejillones	Valencia	1	5,617	5,617
Nitrate	Chilean ports	Spain	1	5,544	5,544
Nitrate	Chile	Spain	5	27,631	27,631
Nitrate	Iquique	Copenhagen	1	7,750	7,750
Nitrate	Mejillones	Antwerp	1	5,518	5,518
Nitrate	Tocopilla	Genoa	1	5,020	5,020
Nitrate	Iquique	Azores [1]	1	4,413	4,413
Nitrate	Mejillones	British Isles	1	4,000	4,000
Nitrate			22	128,668	128,668
Lumber and ties	Everett	New York	1	3,125	.....
Lumber and ties	Tacoma	New York	1	2,780	5,905
Lumber and ties	Portland	Boston	1	4,500	4,500
Lumber and ties	San Francisco	New Orleans	1	891	891
Lumber and ties	West coast of U. S.	East coast of U. S.	4	11,296	11,296
Lumber and ties	Portland	Grangemouth	1	6,197	6,197
Lumber and ties	Portland	London	1	2,032	2,032
Lumber and ties	Vancouver	West Hartlepool	1	6,902	6,902
Lumber and ties	Vancouver	London	1	1,071	1,071
Lumber and ties	Vancouver	England	1	7,372	7,372
Lumber and ties	St. Helens	Santo Domingo	1	2,549	2,549
Lumber and ties	Tacoma	Cuba	1	3,732	3,732
Lumber and ties	Costa Rica	Cristobal	1	599	599
Lumber and ties			12	41,750	41,750
Cold storage and food products	Australasia	London	5	30,766	30,766
Cold storage and food products	Australasia	Southampton	1	2,200	2,200
Cold storage and food products	Australaisa	New York	2	7,153	7,153
Cold storage and food products			8	40,119	40,119

[1] For orders.

FROM PACIFIC TO ATLANTIC—continued.

Commodity.	From—	To—	No. of cargoes.	Tons.	Total tons.
Wheat	Portland	British Isles	2	19,194	.....
Wheat	Seattle	British Isles	1	13,516	32,710
Wheat	Portland	Holland	2	16,868	16,868
Wheat	Portland	Lisbon	1	6,000	.....
Wheat	Seattle	Lisbon	1	7,305	13,305
Wheat	Portland	Norfolk [1]	1	9,954	9,954
Wheat			8	72,837	72,837
Sugar	Java	New York	1	7,100	.....
Sugar	Supe	New York	1	1,806	.....
Sugar	Hongkong	New York	1	768	9,674
Sugar	Peru	Marseilles	1	1,027	1,027
Sugar			4	10,701	10,701
Wool	Australasia	London	4	5,425	5,425
Copper	Antofagasta	New York	1	4,001	4,001
Copper	Vancouver	New York	1	924	924
Copper			2	4,925	4,925
Flour	Portland	Cadiz	1	7,187	7,187
Barley	San Francisco	Norfolk [1]	1	6,100	6,100
Frozen eggs	Hankow	New York	1	5,536	5,536
Coconut oil	Manila	New York	1	2,800	2,800
Manganese ore	Hongkong	New York	1	2,000	2,000
Rubber, raw	Shanghai	New York	1	1,416	1,416

[1] For orders.

LATIN-AMERICAN TRAFFIC.

Commercial vessels, southbound, engaged in Latin-American trade, for November, were classified as follows:

Nationality.	No. of ships.	Registered gross tonnage.	Registered net tonnage.	Panama Canal net tonnage.	Cargo.
					Tons.
United States	28	118,030	75,348	90,977	107,630
British	16	[1]47,738	[1]29,093	[1]37,538	44,617
Danish	5	15,124	9,292	13,135	20,347
Norwegian	4	28,249	18,332	22,107	37,181
Peruvian	3	12,812	7,276	8,900	6,789
Spanish	3	[2]6,529	[2]4,004	[2]4,792	4,443
Italian	2	10,603	6,406	7,882	2,359
Chilean	2	7,612	4,560	6,250	736
French	1	5,923	3,763	4,363	964
Swedish	1	4,852	3,973	4,013	1,758
Totals	65	257,572	162,047	199,867	226,824
Totals for October	66	278,230	175,320	212,902	204,009
Totals for November, 1910	67	263,441	162,348	195,893	109,681

[1] Two British cruisers with displacement tonnage of 12 239 not included.
[2] One Spanish battleship with displacement tonnage of 15,000 not included.

Four of the above vessels, with an aggregate Panama Canal net tonnage of 13,330 were in ballast; 1 from the United States, 1 from Europe, 1 from the West Indies, and 1 from Cristobal. In addition to the above 4 ships, 2 British cruisers, and a Spanish battleship, combining a total displacement tonnage of 27,239, passed through the Canal southbound in ballast.

This traffic is further classified in the following table:

No. vessels	Registry.	Commodity.	Tons of cargo.	Origin of cargo.
	To west coast of South America—			
7	United States	General merchandise.	16,882	East coast of United States.
4	United States	Coal	20,680	East coast of United States.
1	United States	Coal and general mdse	6,149	East coast of United States.
1	United States	Ballast	.....	East coast of United States.
4	Danish	Coal	16,347	East coast of United States.
2	Norwegian	Coal	19,221	East coast of United States.
1	Norwegian	General	8,660	East coast of United States.
1	British	Coke and oil	3,981	East coast of United States.
1	British	Coke	3,770	East coast of United States.
1	British	General	1,346	East coast of United States.
1	Spanish	Coal	4,443	East coast of United States.
24			101,479	East coast of United States.

No. vessels	Registry.	Commodity.	Tons of cargo.	Origin of cargo.
	To west coast of South America—			
4	British	General merchandise.	20,014	British Isles.
1	Peruvian	Coal	4,762	British Isles.
2	Italian	General	2,359	Italy.
1	Danish	General and cement	4,000	Denmark.
1	British	General merchandise.	2,695	Holland.
1	Swedish	General merchandise.	1,758	Sweden.
1	French	General merchandise.	964	Germany.
1	Spanish	Ballast	.....	Spain.
1	British	Ballast[1]	.....	British Isles.
13	.....	.....	36,552	Europe.
3	United States	General	490	Cristobal, C. Z.
1	United States	Ballast	.....	Cristobal, C. Z.
3	British	General	1,276	Cristobal, C. Z.
2	Peruvian	General	2,027	Cristobal, C. Z.
2	Chilean	General	736	Cristobal, C. Z.
11	.....	.....	4,529	Cristobal, C. Z.
4	United States	Crude oil	34,900	East coast of Mexico.
1	Norwegian	Crude oil	9,300	East coast of Mexico.
1	British	Crude oil	9,000	East coast of Mexico.
6	.....	.....	53,200	East coast of Mexico.
1	United States	Ballast	.....	Barbados.
1	British	Ballast[1]	.....	Trinidad.
1	Spanish	Ballast[2]	.....	Porto Rico.
3	.....	.....	.....	West Indies.
	To west coast of United States—			
1	United States	Crude oil	11,000	East coast of Mexico.
1	United States	Crude naphtha	9,000	East coast of Mexico.
2	.....	.....	20,000	East coast of Mexico.
2	United States	General merchandise.	4,394	Cristobal, C. Z.
1	United States	General merchandise.	1,435	Argentina.
	To west coast of Central America—			
1	British	General merchandise.	1,538	British Isles.
1	British	General merchandise.	997	Cristobal, C. Z.
	To east coast of South America—			
1	United States	Coal	2,700	East coast of United States.
65	Total Latin-American traffic, Atlantic Pacific	.....	226,821	.....

[1] Cruiser. [2] Battleship.

The Latin-American traffic, northbound, through the Canal, for November, is classified in the following tabulation:

Nationality.	No. of ships.	Registered gross tonnage.	Registered net tonnage.	Panama Canal net tonnage.	Tons of cargo.
United States	26	123,188	79,856	94,763	73,523
British	20	86,954	52,959	64,197	44,508
Spanish	7	24,745	15,668	18,713	36,420
German	3	16,327	10,354	12,585	13,122
Chilean	3	12,212	6,853	9,201	4,326
Italian	2	13,241	7,480	8,445	8,517
Peruvian	2	5,171	2,683	3,934	5,318
Norwegian	1	6,962	4,418	5,108	.....
Japanese	1	6,071	4,424	4,565	7,700
French	1	5,681	3,600	4,081	6,750
Danish	1	4,611	2,864	4,934	7,704
Totals	67	305,163	191,159	230,526	207,888
Totals for October	74	314,676	195,235	238,417	218,297
Totals for November, 1919	45	184,536	112,260	141,665	150,658

Eleven of the above ships were in ballast, 10 of which were empty tankers returning to the east coast of Mexico, and the other a vessel bound from the west coast of South America to the east coast of the United States:

This traffic is further classified in the following table:

No. vessels	Registry.	Commodity.	Tons of cargo.	Destined to—
	From west coast of South America—			
5	United States	Nitrate	35,119	East coast of United States.
4	United States	General merchandise	12,015	East coast of United States.
1	United States	Nitrate and copper	8,733	East coast of United States.
1	United States	Sugar	1,806	East coast of United States.
1	United States	Ballast	.....	East coast of United States.
2	Spanish	Nitrate	9,920	East coast of United States.
1	British	Nitrate	5,418	East coast of United States.
1	British	General merchandise	2,149	East coast of United States.
1	Danish	Nitrate and copper	7,704	East coast of United States.
1	Japanese	Nitrate	7,700	East coast of United States.
1	German	Nitrate	4,000	East coast of United States.
1	Chilean	General merchandise	2,799	East coast of United States.
20	.....	.....	97,263	East coast of United States.
5	British	General merchandise	26,390	British Isles.
2	British	Ballast[1]	.....	British Isles.
1	German	Nitrate	4,000	British Isles.
4	Spanish	Nitrate	22,087	Spain.
1	French	Nitrate and general	6,750	Spain.
1	Italian	Nitrate and sugar	6,500	Italy.
1	Italian	General merchandise	2,017	Italy.
1	United States	Nitrate	7,750	Denmark.
1	British	Nitrate	5,818	Holland.
1	German	General merchandise	5,122	Germany.
18	.....	.....	86,434	European ports.
6	British	General merchandise	4,376	Cristobal, C. Z.
2	Peruvian	General merchandise	5,318	Cristobal, C. Z.
2	Chilean	General merchandise	1,527	Cristobal, C. Z.
1	United States	General merchandise	646	Cristobal, C. Z.
11	.....	.....	11,867	Cristobal, C. Z.
5	United States	Ballast	.....	East coast of Mexico.
1	British	Ballast	.....	East coast of Mexico.
1	Norwegian	Ballast	.....	East coast of Mexico.
7	.....	.....	.....	East coast of Mexico.
1	Spanish	Nitrate	4,413	Azore Islands.[2]
	From west coast of United States—			
2	United States	Ballast	.....	East coast of Mexico.
1	British	Ballast	.....	East coast of Mexico.
3	.....	.....	.....	East coast of Mexico.
3	United States	General merchandise	1,137	Cristobal, C. Z.
1	United States	General merchandise	5,610	Argentina.
	From west coast of Central America—			
2	British	General merchandise	357	Cristobal, C. Z.
1	United States	Hardwood, bullion	707	Cristobal, C. Z.
3	.....	.....	1,064	Cristobal, C. Z.
67	Total Latin-American traffic, Pacific to Atlantic	.....	297,888	.....

[1] Tug. [2] For orders.

Forty-two of the vessels passing through the Canal during November were under control of the United States Shipping Board, combining a total Panama Canal net tonnage of 173,692, and cargo of 170,345. Of these, 23 were southbound, with a Panama Canal net tonnage of 93,401, and cargo of 75,610 tons; 19 were northbound, with a Panama Canal net tonnage of 80,291, and cargo of 94,735. In addition to the above, 2 vessels under control of the Shipping Board, with a combined Panama Canal net tonnage of 10,138, and carrying 16,511 tons of fuel for the Navy, passed through the Canal southbound during the month.

Statements attached to this report show the origin and destination of all cargo passing through the Canal during November (*see* pages 299 and 300); the following tabulation gives the classification of the traffic over the principal trade routes.

	Total vessels.			Vessels in ballast.	
	Vessels.	Panama Canal net tonnage.	Cargo.	Vessels.	Panama Canal net tonnage.
Atlantic to Pacific.					
East coast of United States to west coast of South America	24	80,685	101,479	1	7,689
United States coastwise	19	69,247	51,454	.....	.....
East coast of United States to Australasia	14	73,306	101,424	.....	.....
Europe to west coast of South America	13	[2]45,500	36,552	2	[2]2,581
Cristobal to west coast of South America	11	15,646	4,529	1	742
East coast of United States to Far East	8	38,558	51,810	.....	.....
East coast of Mexico to west coast of South America	6	31,901	53,200	.....	.....
Europe to west coast of United States	5	26,401	2,500	4	19,440
Europe to Australasia	3	22,277	27,244	.....	.....
Mexico to west coast of United States	2	11,449	20,000	.....	.....
East coast of United States to west coast of Canada	2	12,389	18,890	.....	.....
Foreign ships in ballast between United States coastwise ports	2	6,008	.....	2	6,008
Cristobal to west coast of United States	2	4,061	4,394	.....	.....
West Indies to west coast of South America[1]	2	[3]2,318	.....	2	[3]2,318
Porto Rico to west coast of South America	1	(4)	.....	1	(4)
East coast of Canada to Australasia	1	5,296	3,795	.....	.....
Europe to Far East	1	4,873	6,800	.....	.....
Africa to west coast of United States	1	5,707	.....	1	5,707
Europe to west coast of Canada	1	4,008	368	.....	.....
East coast of South America to west coast of United States	1	4,174	1,435	.....	.....
Europe to Central America	1	1,797	1,538	.....	.....
East coast of United States to east coast of South America	1	1,644	2,700	.....	.....
Cristobal to west coast of Central America	1	692	997	.....	.....
Local between Canal Zone ports	1	14	.....	1	14
Totals for November	123	467,951	491,109	15	44,499
Totals for preceding month	119	470,536	488,713	14	41,664
Totals for November, 1919	88	274,251	215,554	26	71,694
Pacific to Atlantic.					
West coast of South America to east coast of United States	20	74,489	97,363	1	5,100
West coast of South America to Europe	18	66,925	86,434	2	219
West coast of United States to Europe	14	76,405	112,307	.....	.....
West coast of South America to Cristobal	11	16,007	11,867	.....	.....
United States coastwise	10	38,708	41,269	1	7,095
Far East to east coast of United States	7	30,892	37,864	1	1,793
West coast of South America to Mexico	7	35,927	.....	7	35,927
Australasia to Europe	6	52,507	38,391	.....	.....
West coast of United States to Mexico	3	13,139	.....	3	13,139
West coast of Canada to Europe	3	13,864	20,474	.....	.....
West coast of United States to Cristobal	3	5,654	1,137	.....	.....
West coast of Central America to Cristobal	3	2,149	1,064	.....	.....
Australasia to east coast of United States	2	14,714	10,473	.....	.....
Between United States coastwise ports[5]	2	9,525	16,054	.....	.....
West coast of United States to east coast of South America	1	4,034	5,610	.....	.....
West coast of South America to Azores[5]	1	2,333	4,413	.....	.....
West coast of United States to Cuba	1	2,187	3,732	.....	.....
Philippines to east coast of United States	1	1,795	2,8 0	.....	.....
West coast of United States to West Indies[1]	1	635	2,549	.....	.....
Local, between Canal Zone ports	1	14	.....	1	14
Totals for November	115	461,924	493,801	16	63,287
Totals for preceding month	119	465,043	502,353	19	77,205
Totals for November, 1919	92	322,897	359,926	7	38,869

[1] Except Cuba and Porto Rico.
[2] British cruiser of 5,794 tons displacement not included.
[3] British cruiser of 6,455 tons displacement not included.
[4] Spanish battleship of 15,000 tons displacement.
[5] For orders.

SERVICES TO CANAL SHIPPING.

Miscellaneous repairs were made at Cristobal and Balboa shops and dry docks on 123 vessels and craft during November; 97 at Cristobal, and 26 at Balboa. Of these, 15 were dry-docked; 6 at Cristobal and 9 at Balboa. Bunker coal in the amount of 36,300 tons, was supplied to 115 commercial vessels; 31,542 tons to 96 vessels at Cristobal and 4,758 tons to 19 vessels at Balboa. Thirteen commercial ships were supplied a total of 21,485 barrels of fuel oil; 3 vessels with 4,715 barrels at Cristobal, and 10 vessels with 16,770 barrels at Balboa. Water, in the amount of 14,208,184 gallons, was supplied to 258 vessels; 11,784,934 gallons to 183 vessels at Cristobal, and 2,423,250 gallons to 75 vessels at Balboa. Sales of commissary supplies to commercial ships, other than those of the Panama Railroad Steamship Line, aggregated $82,168.93, including $4,062.92 for laundry service; these sales were made to 162

vessels at Cristobal in the amount of $52,539.86; and to 97 vessels at Balboa in the amount of $29,629.07. Receipts for tug and launch service totaled $23,729, of which $13,817.75 were earned at Cristobal, and $9,911.25 at Balboa. Fees for pilotage totaled $10,617, of which $8,073 was earned at Cristobal and $2,544 at Balboa.

STATEMENT OF OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Canal are shown in the following tabulation:

Item.	Cristobal.	Balboa.	Total.
Commercial ships passing through the Canal	123	115	238
Net tonnage of above vessels, Panama Canal measurement	467,951	461,924	929,875
United States equivalent net tonnage of commercial vessels	387,397	378,420	765,817
Registered gross tonnage of commercial vessels	593,207	590,865	1,184,072
Registered net tonnage of commercial vessels	380,583	375,640	756,223
Cargo through the Canal in commercial vessels—tons of 2,240 pounds	491,109	493,801	984,910
Deck cargo included in above ... tons	1,567	3,494	5,061
Nationality of commercial vessels through the Canal:			
British	37	38	75
Chilean	2	3	5
Danish	6	2	8
Dutch	1	1	2
French	1	1	2
German	.....	3	3
Italian	2	2	4
Japanese	3	3	6
Norwegian	6	2	8
Panamanian	1	1	2
Peruvian	3	2	5
Spanish	3	7	10
Swedish	2	1	3
United States	56	49	105
Totals for November	123	115	238
Totals for last month	119	119	238
Totals for November, 1919	88	92	180
Panama Canal net tonnage of commercial vessels by nationality:			
British	154,641	174,236	328,877
Chilean	6,250	9,201	15,451
Danish	16,974	10,594	27,568
Dutch	6,961	6,068	13,029
French	4,363	4,081	8,444
German	.....	12,585	12,585
Italian	7,882	8,445	16,327
Japanese	15,206	12,864	28,070
Norwegian	29,105	8,482	37,587
Panamanian	14	14	28
Peruvian	8,900	3,934	12,834
Spanish	4,702	18,713	23,415
Swedish	8,048	3,967	12,015
United States	204,905	188,740	393,645
Totals for November	467,951	461,924	929,875
Totals for last month	470,536	465,043	935,579
Totals for November, 1919	274,251	322,897	597,148
United States equivalent net tonnage of commercial vessels by nationality:			
British	126,835	142,552	269,387
Chilean	3,608	6,028	9,636
Danish	13,889	8,021	21,910
Dutch	6,852	4,860	11,712
French	4,326	3,566	7,892
German	.....	11,162	11,162
Italian	5,981	6,740	12,721
Japanese	13,750	11,425	25,175
Norwegian	26,819	7,412	34,231
Panamanian	14	14	28
Peruvian	6,005	2,472	8,477
Spanish	4,018	15,887	19,905
Swedish	5,745	2,295	8,040
United States	169,555	155,986	325,541
Totals for November	387,397	378,420	765,817
Totals for last month	381,447	380,566	762,013
Totals for November, 1919	224,538	264,295	488,833
Registered gross tonnage of commercial vessels by nationality:			
British	191,336	220,590	411,926
Chilean	7,612	12,312	19,924

Item.	Cristobal.	Balboa.	Total.
Registered gross tonnage of commercial vessels by nationality—contd.			
Danish	19,875	11,530	31,405
Dutch	9,065	7,651	16,716
French	5,923	5,681	11,604
German	.....	16,327	16,327
Italian	10,603	13,241	23,844
Japanese	20,781	17,022	37,803
Norwegian	37,013	11,709	48,722
Panamanian	14	17	31
Peruvian	12,812	5,171	17,983
Spanish	6,529	24,745	31,274
Swedish	9,267	3,774	13,041
United States	262,377	241,095	503,472
Totals for November	593,207	590,865	1,184,072
Totals for last month	599,920	591,016	1,190,936
Totals for November, 1919	363,523	408,998	772,521
Registered net tonnage of commercial vessels by nationality:			
British	122,173	139,609	261,782
Chilean	4,560	6,853	11,413
Danish	12,257	8,087	20,344
Dutch	6,871	4,796	11,667
French	3,763	3,600	7,363
German	.....	10,354	10,354
Italian	6,406	7,480	13,886
Japanese	13,460	10,978	24,438
Norwegian	23,837	7,381	31,218
Panamanian	14	14	28
Peruvian	7,276	2,683	9,959
Spanish	4,004	15,668	19,672
Swedish	7,302	2,875	10,177
United States	168,660	155,262	323,922
Totals for November	380,583	375,640	756,223
Totals for last month	381,626	372,914	754,540
Totals for November, 1919	226,888	259,939	486,827
Tons of cargo carried by commercial vessels by nationality:			
British	174,435	169,467	343,902
Chilean	736	4,326	5,062
Danish	20,347	16,854	37,201
Dutch	2,500	8,786	11,286
French	964	6,750	7,714
German	.....	13,122	13,122
Italian	2,359	8,517	19,876
Japanese	19,363	19,213	38,576
Norwegian	48,581	6,100	54,681
Peruvian	6,789	5,318	12,107
Spanish	4,443	36,420	40,863
Swedish	7,765	5,383	13,148
United States	202,827	193,545	396,372
Totals for November	491,109	493,801	984,910
Totals for last month	488,713	502,353	991,066
Totals for November, 1919	215,554	359,926	575,480
Tolls levied against commercial vessels by nationality:			
British	$161,972.94	$173,729.61	$335,702.55
Chilean	4,510.00	7,535.00	12,045.00
Danish	16,991.10	10,026.25	27,017.35
Dutch	8,353.20	6,075.00	14,428.20
French	5,235.60	4,457.50	9,693.10
German	.....	13,925.40	13,925.40
Italian	7,476.25	8,425.00	15,901.25
Japanese	17,034.70	14,146.75	31,181.45
Norwegian	33,050.55	7,412.76	40,463.31
Panamanian	10.50	10.50	21.00
Peruvian	7,371.55	3,071.05	10,442.60
Spanish	11,680.82	19,858.75	31,539.57
Swedish	7,181.25	2,868.75	10,050.00
United States	203,129.98	178,371.35	381,501.33
Totals for November	$483,998.44	$449,913.67	$933,912.11
Totals for last month	$463,916.53	$447,909.05	$911,825.58
Vessels passing through the Canal free of tolls:			
U. S. Navy tugs	2	.....	2
U. S. Navy destroyer	1	.....	1
U. S. Navy submarine	1	.....	1

Item.	Cristobal.	Balboa.	Total.
Vessels passing through the Canal free of tolls—continued.			
U. S. Navy fuel ships	1	1	2
U. S. Navy cargo ship	1	.....	1
U. S. Navy ammunition ship	.....	1	1
U. S. Army tugs	3	1	4
U. S. Army transport	1	.....	1
Colliers with fuel for Army and Navy	3	.....	3
Totals	13	3	16
Yachts, ocean-going, passing through Canal	1	1	2
Net tonnage of above, Panama Canal net measurement	14	14	28
Total ocean-going vessels passing through the Canal	136	118	254
Launches and miscellaneous craft passing through the Canal	3	1	4
Net tonnage of above, Panama Canal measurement	13	1	14
Total vessels and craft passing through Canal	139	119	258
Cargo carried by government vessels on which no tolls were charged	37,475	94	37,569
Commercial vessels through the Canal without cargo but not in ballast	2	.....	2
Net tonnage of above, Panama Canal measurement	6,008	.....	6,008
Motor vessels through the Canal	4	4	8
Net tonnage of above, Panama Canal measurement	14,631	14,630	29,261
Sailing vessel through the Canal	.....	1	1
Net tonnage of above, Panama Canal measurement	.....	1,793	1,793
Commercial vessels through Canal with negative U. S. equivalent net tonnage	.....	2	2
Net tonnage of above, Panama Canal measurement	.....	210	210
Commercial vessels through the Canal in ballast	12	16	28
Net tonnage of above, Panama Canal measurement	38,682	63,278	101,960
Tolls levied:			
On laden vessels	$435,601.70	$404,269.90	$839,874.60
On vessels in ballast	28,718.74	45,633.27	74,352.01
On vessels in ballast, laden rate (excess fuel)	6,040.00	.....	6,040 00
On displacement tonnage	13,624.50	.....	13,624.50
On ocean-going yachts	10,50	10,50	21.00
On launches and miscellaneous craft	13,65	.75	14,40
Total, all vessels	$484,012.09	$449,914.42	$933,926 51
Number, registered gross and registered net tonnage of vessels entering and clearing Canal ports, including ships transiting Canal:			
Number entering	297	250	547
Number clearing	295	250	545
Total, entering and clearing	592	500	1,092
Registered gross tonnage of above, entering	1,529,098	1,281,661	2,810,759
Registered gross tonnage of above, clearing	1,538,763	1,275,736	2,814,499
Total, entering and clearing	3,067,861	2,557,397	5,625,258
Registered net tonnage of above, entering	971,765	840,981	1,812,746
Registered net tonnage of above, clearing	972,177	828,043	1,800,220
Total, entering and clearing	1,943,942	1,669,024	3,612,966
Vessels entering port but not transiting Canal:			
Number entering	58	4	62
Gross tonnage of above	251,310	14,747	266,057
Net tonnage of above	141,518	9,727	151,245
Vessels clearing port but not transiting Canal:			
Number cleared	55	4	59
Gross tonnage of above	243,973	19,387	263,360
Net tonnage of above	140,827	12,871	153,698
Vessels transiting Canal and handling passengers or cargo at port:			
Number entering	44	44	88
Gross tonnage of above	181,634	179,065	360,699
Net tonnage of above	123,404	122,735	246,139
Vessels transiting Canal and handling passengers or cargo at port:			
Numbering clearing	44	43	87
Gross tonnage of above	190,657	159,765	350,422
Net tonnage of above	127,462	103,435	230,897
Transit cargo arriving ..... tons	1,008,003	991,298	1,999,301
Transit cargo clearing ..... tons	1,040,413	997,412	2,037,825
Total transit cargo ..... tons	2,048,416	1,988,710	4,037,126
Cargo received for transshipment ..... tons	27,863	451	28,314
Cargo transshipped ..... tons	33,748	.....	33,748
Local cargo arriving ..... tons	24,284	24,776	49,060
Local cargo shipped ..... tons	2,896	429	3,325
Total local cargo ..... tons	27,180	25,205	52,385

Item.	Cristobal.	Balboa.	Total.
Cargo handled by Receiving and Forwarding Agency, P. R. R.:			
Received.....tons..	54,757	7,650	62,407
Dispatched.....tons..	41,671	572	42,243
Rehandled.....tons..	4,651	4,946	9,597
Stevedored, included in above.....tons..	41,155	614	41,769
Vessels supplied with bunker coal:			
Commercial vessels, other than Panama Railroad vessels.....	93	18	111
Panama Railroad vessels.....	3	1	4
U. S. Army vessels.....	5	1	6
Total vessels.....	101	20	121
Coal supplied above vessels:			
Commercial vessels, other than Panama Railroad vessels.....tons..	31,115	4,740	35,855
Panama Railroad vessels.....tons..	427	18	445
U. S. Army vessels .....tons..	154	23	177
Total.....tons..	31,696	4,781	36,477
Coal issues, miscellaneous:			
Panama Railroad departments.....tons .	919	10	929
U. S. Army, excepting vessels.....tons..	623	.....	623
Panama Canal departments.....tons..	1,456	264	1,720
Individuals and companies.....tons..	326	.....	326
Total coal furnished from Panama Railroad deposits.....tons..	35,020	5,055	40,075
Coal receiving during November.....tons..	41,187	.....	41,187
Coal on hand, December 1, 1920.....tons..	21,070	3,684	24,754
Coal on hand November 1, 1920.....tons..	14,903	8,739	23,642
Coal, U. S. Navy account.			
Issued to U. S. Navy, including vessels.....tons..	1,635	.....	1,635
Received during November.....tons..	.....	10,015	10,015
Coal on hand, December 1, 1920.....tons..	56,898	25,756	82,654
Coal on hand, November 1, 1920.....tons..	58,533	15,741	74,274
Vessels supplied with fuel oil from Panama Canal tanks:			
Commercial vessels other than Panama Railroad vessels.....	1	10	11
Panama Railroad vessels.....	2	.....	2
U. S. Army vessels.....	1	1	2
Total vessels.....	4	11	15
Fuel oil supplied to above vessels:			
Commercial vessels, other than Panama Railroad vessels.....bbls..	487	16,770	17,257
Panama Railroad vessels.....bbls..	4,228	.....	4,228
U. S. Army vessels.....bbls..	567	554	1,121
Total issues to vessels.....bbls..	5,282	17,324	22,606
Fuel oil issues, miscellaneous:			
U. S. Army.....bbls..	.....	247	247
To Panama Canal departments.....bbls..	6,539	18,884	25,423
To Panama Railroad departments.....bbls...	410	172	582
To individuals and companies.....bbls..	3,578	5,383	8,961
Exchanged for Diesel oil.....bbls..	8,605	2,908	11,513
Total issues from Panama Canal tanks.....bbls..	24,414	44,918	69,332
Fuel oil received during November.....bbls..	47,149	.....	47,149
Fuel oil on hand, December 1, 1920 .....bbls..	125,925	71,627	197,552
Fuel oil on hand, November 1, 1920.....bbls..	103,190	116,545	219,735
Fuel oil pumped for individuals and companies.....bbls..	196,836	154,440	251,276
Diesel oil on hand, November 1, 1920.....bbls..	53,576	1,083	54,659
Diesel oil on hand, December 1, 1920.....bbls..	53,576	1,083	54,659
Vessels supplied with water.....	183	75	258
Water sold to above vessels.....gals..	11,784,934	2,423,250	14,208,184
Vessels furnished commissary supplies:			
Commercial vessels, other than Panama Railroad vessels.....	162	97	259
Panama Railroad vessels.....	11	1	12
U. S. Government vessels.....	21	8	29
Total vessels furnished supplies	194	106	300
Commissary sales to commercial vessels, other than Panama Railroad:			
Ice.....	$2,678.40	$532.00	$3,210 40
Wholesale groceries.....	7,799.23	6,608 48	14,407.71
Wholesale cold storage.....	35,238.70	20,244 72	55,483.42
Laundry.....	3,663.17	399.75	4,062 92
[illegible]	3,160.36	1,844.12	5,004.48
Totals.....	$52,539.86	$29,629.07	$82,168 93
Commissary sales to Panama Railroad vessels:			
Ice.....	$80.40	.....	$80 40
Wholesale groceries.....	2,020.71	118.83	2,139.54
Wholesale cold storage.....	6,445.47	50.14	6,495 61
Laundry.....	1,942.76	.....	1,942.76
Miscellaneous.....	641.09	.....	641.09
Totals.....	$11,130.43	$168.97	$11,299.40

Item.	Cristobal.	Balboa.	Total.
Commissary sales to U. S. Government vessels:			
Ice	$139.84	$47.00	$186.84
Wholesale groceries	1,635.34	264.99	1,900.33
Wholesale cold storage	3,493.70	952.23	4,445.93
Laundry	713.79	.....	713.79
Miscellaneous	525.06	101.76	626.82
Totals	$6,507.73	$1,365.98	$7,873.71
Total commissary sales to all vessels:			
Month of November, 1920	$70,178.02	$31,164.02	$101,342.04
Month of October, 1920	132,225.58	44,334.69	176,560.27
Month of November, 1919	72,242.33	24,010.33	96,252.66
Movement of passengers.			
Disembarking at Canal ports:			
First class—			
From Atlantic ports	1,363	4	1,367
From Pacific ports	178	129	307
Total, first class	1,541	133	1,674
Other than first class—			
From Atlantic ports	1,098	.....	1,098
From Pacific ports	46	195	241
Total, other than first class	1,144	195	1,339
Total disembarking at Canal ports	2,685	328	3,013
Embarking from Canal ports:			
First class—			
For Atlantic ports	954	2	956
For Pacific ports	209	106	315
Total, first class	1,163	108	1,271
Other than first class—			
For Atlantic ports	704	3	707
For Pacific ports	37	57	94
Total, other than first class	741	60	801
Total embarking at Canal ports	1,904	168	2,072
Remaining on board vessels:			
First class—			
Bound from Atlantic to Pacific ports	311	333	644
Bound from Pacific to Atlantic ports	401	498	899
Bound from Atlantic to Atlantic ports	377	.....	377
Bound from Pacific to Pacific ports	.....	48	48
Total, first class	1,089	879	1,968
Other than first class—			
Bound from Atlantic to Pacific ports	899	1,216	2,115
Bound from Pacific to Atlantic ports	316	417	733
Bound from Atlantic to Atlantic ports	80	.....	80
Bound from Pacific to Pacific ports	.....	529	529
Total, other than first class	1,295	2,162	3,457
Total, remaining on board	2,384	3,041	5,425
Total passengers arriving	5,069	3,369	8,438
Total passengers departing	4,288	3,209	7,497
Arrivals in excess of departures	781	160	941
Services to American seamen:			
Seamen paid off	249	101	350
Seamen shipped	279	125	404
Seamen deserted	26	10	36
Seamen lodged and subsisted	35	16	51
Seamen repatriated	24	9	33
Wages of American seamen:			
Total amount of wages earned	$10,608.40	$14,403.60	$25,012.00
Deductions approved by Deputy Shipping Commissioner	1,487.57	4,778.78	6,266.35
Balance due seamen	$9,120.83	$9,624.82	$18,745.65
Paid to seamen	6,046.35	6,493.89	12,540.24
Received on deposit for seamen	3,074.48	3,130.93	6,205.41
Immigration deposits received	.....	$219.45	$219.45

Item.	Cristobal.	Balboa.	Total.
Services to American vessels:			
Crew shipped	1	.....	1
Shipping articles written	1	.....	1
Marine notes of protest noted	8	5	13
Bills of health issued	161	133	294
Clearances issued	156	131	287

LOCK OPERATION.

The following tabulations give the number of lockages, vessels through the locks, and the consumption of water for lockages, for the month of November, 1920:

COMMERCIAL VESSELS ONLY.

	Number of lockages.			Number of vessels.		
	North.	South.	Total.	North.	South.	Total.
Gatun	112	112	224	122	124	246
Pedro Miguel	112	123	235	115	125	240
Miraflores	113	124	237	116	125	241
Totals	337	359	696	353	374	727

TOTAL LOCKAGES OF VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Lockages.			
Commercial	224	235	237
Noncommercial, Army and Navy	8	13	14
Noncommercial, Canal equipment	14	18	15
Total	246	266	266
Vessels.			
Commercial	246	240	241
Noncommercial, Army and Navy	17	16	16
Noncommercial, Canal equipment	29	37	31
Total	292	293	288

CONSUMPTION OF WATER FOR LOCKAGES, LEAKAGES, ETC.

	Gatun.	Pedro Miguel.	Miraflores.
	Cubic feet.	*Cubic feet.*	*Cubic feet.*
Lockages	1,072,500,000	887,980,000	830,870,000
Leakage	30,000,000	76,010,000	59,000,000
Maintenance	.....	.....	3,320,000
Totals	1,102,500,000	963,990,000	893,190,000

METEOROLOGY AND HYDROGRAPHY.

The rainfall for the month was generally below normal everywhere except over the Pacific section where it was considerably above the average, the rainfall at Balboa and Balboa Heights being the highest on record at these stations for the month of November. This excess was due mainly to the heavy rain on the Pacific side on the 28th, 5.33 inches being measured at Balboa Heights, and 4.57 inches at Balboa. While the rainfall at Balboa and Balboa Heights was unusually heavy on the 28th, it was not a record rain, 7.57 inches having been recorded at Balboa on November 16 and 17, 1906. The total rainfall ranged from 5.47 inches at the Rio Boqueron to 21.27 inches at Colon. The heaviest rainfall recorded in any one day was 6.11 inches at Porto Bello on November 7.

The estimated November rainfall over the Gatun Lake watershed was 11.16 inches, compared with a 10-year mean of 14.59 inches. Over the Chagres River watershed above Alhajuela it was 12.39 inches, compared with a 19-year mean of 18.09 inches.

The discharge of the Chagres River at Alhajuela was 3,751 c. f. s., being 18 per cent below the 19-year November average of 4,602 c. f. s., and furnished 34 per cent of the Gatun Lake total yield. The maximum momentary discharge for the month was 23,600 c. f. s. at elevation 101.48 on the 7th, and the minimum momentary discharge was 2,196 on the 27th.

The Gatun Lake watershed total yield was 11,096 c. f. s., being 18 per cent below the 10-year November mean of 13,554 c. f. s. The maximum total yield for November was 24,488 c. f. s. in 1917, and the minimum total yield was 8,673 c. f. s. in 1919. The net yield for the month was 10,602 c. f. s., which is 19 per cent below the 10-year

mean of 13,059 c. f. s. The lake varied from a maximum elevation of 86.79 feet on the 28th, to a minimum elevation of 86.46 feet on the 5th, averaged 86.58 feet, and ended at 86.77 feet midnight the 30th. An increase of 1,000 million cubic feet was effected by raising the surface elevation of the lake approximately 3 inches during the month. The draft on the lake for lockages and power was 2,348 c. f. s. as compared with 2,305 c. f. s. for last month, and 2,048 c. f. s. for November, 1919. The ratio of water used for power and lockages was 2.1 to 1.

Miraflores Lake varied from a maximum elevation of 54.72 feet on the 2d, to a minimum elevation of 51.30 feet on the 29th, averaged 53.17 feet, and ended at elevation 52.08 feet midnight the 30th.

Temperatures recorded during the month show a minimum of 68° F. at Alhajuela, and a maximum of 92° F. at Balboa Heights.

A slight seismic disturbance was recorded at Balboa Heights on the evening of November 12. The epicenter of the disturbance was 185 miles distant and probably to the west or southwest.

ELECTRICAL DIVISION.

The combined gross output of the Gatun hydro-electric station for November was 5,700,600 KWH. on a computed water consumption of 4,124,870,000 cubic feet.

The combined gross output of the Miraflores steam plant was 122,020 KWH. with an oil consumption of 2,733 barrels.

The total gross output of both stations was 5,822,620 KWH. The total power distributed to consumers was 4,902,701 KWH. The total loss of power in plant auxiliaries, transmission, and transformation was 934,199 KWH, or 16.1 of gross output.

The work of replacing all defective insulator units on the transmission line was completed during the month, resulting in the replacement of a total of 1,915 insulation units. Miscellaneous repairs and installations of electric equipment were made on 46 vessels during the month, 32 at Cristobal and 14 at Balboa. There were 65 spillway gate operations during the month, 47 of which were for lake elevation regulation.

The following work was under progress during the month, with completion on November 30, as shown:

	Per cent completed.
Installation of 4 K-5 switches at Miraflores substation	[1] 65
Installation of two 1,000-ampere, K-12 switches at Cristobal substation	81
Installation of new 8,400 KVA transformer and 3 new tie-line equipments at Gatun substation	69
Installation of 2 complete feeder equipments at Balboa substation	[1] 95
Installation of three 400,000 c/m 3-conductor tie lines between Gatun hydro-electric and substation	58
Transformers and other electrical work at new incinerator plant, Cristobal	75

[1] Indicates no work was done during the month.

SHOP, FOUNDRY, AND DRY DOCK WORK.

The general overhaul of the steamship *General H. F. Hodges* was completed at the end of the month. This work involved the laying of new decks, renewal of tank tops under the boilers, the renewal of shell plating in the bow and partial renewing of collision bulkhead, the making water-tight of tanks and double bottom, and the making of the center division plate between double bottoms swash tight but not absolutely water tight. The engines and auxiliaries were overhauled, new winches and deck steam lines installed and a closed feed water heater and a refrigerator plant installed on the vessel. Miscellaneous joiner and other repairs were made through the ship.

Satisfactory progress was made on the rebuilding of the steamship *Maine*, and the conversion of the tug *Bohio* from a coal burner into an oil burner. On the former ship the installation of machinery was materially advanced, together with the necessary piping, while on the steel work good progress was made in riveting and calking.

In addition to the above, miscellaneous repairs were made at the Balboa shops on the following vessels during the month: Steamships *Major Wheeler*, *S. V. Harkness*, *City of Vancouver*, *Ansaldo San Giorgio IV*, *Lompoc*, *Richconcal*, *Lake Ennis*, *Uncas*, *Waukegan*, *Nishmaha*, *Wawalona*, *Guardian*, *Lavada*, *General H. F. Hodges*, *Benjamin Brewster*, *Ullstad*, *Heber*, *Lake Ellicott*, *Olockson*, *Cadlo*, and *Pasadena*; U. S. S. tug *Sciota*, U. S. S. *Tattnall*, and barges *Dan F. Hanlon* and *Griffson*.

The following vessels were in dry dock at Balboa during the month: Steamships *Lompoc* and *Guardian*; barges *Nos. 66*, *131*, *134*, *135*, and *Dan F. Hanlon*; tugs *Bohio* and *Empire*.

The more important repair work performed at the Cristobal shops during the month included the following: New uptakes, bitts, and L. P. rings were installed in the tug *Tavernilla* and pumps, towing and circulating engines were repaired; keel and sheathing of the U. S. S. *C. 287* were repaired, and hull cleaned; the U. S. S. Eagle *No.*

32 was cleaned and painted, loose rivets tightened, and bow welded; the feed pump, dynamo engine, and air pump of the steamship *San Pascual* were repaired; the boiler, anchor windlass, and fire pump of the steamship *Corning* were repaired; dents in the hull of the steamship *Lake Flynus* were removed, loose rivets renewed, and ship cleaned and painted.

In addition to the above miscellaneous repairs were made on the following vessels: Steamships *Neches, Cartago, Europa, Mexico, Caribbean, Turrialba, Stuyvesant, Parismina, Pastores, Quilpue, Advance, City of Para, Navarre, Ulysses, Cape Romain, Argonne, Eldorado, Lake Ennis, San Juan, Perene, Tyne, Acajutla, Arawa, Achilles, Point Lobos, Corning, Deerlodge, Panama, Guatemala, Balboa, Allianca, Wawalona, Arzila, Osaqumsick, Victoria, Lake Elkwater, Toloa, Ucayali, Santa Rita, Salvador, San Jose, General G. W. Goethals, Bologna, Aviles, Frederick Luckenbach, Heredia, Honduras, Athenic, Ulua, Minnequa, Puerto Rico, Heber, Benjamin Brewster, City of Vancouver, Chile, Ancon, Colon, Cartago, Waukegan, Peru, Fields,* and *Ruepeha;* motorships *Nobel* and *La Paz;* tugs *St. Finbar, St. Catherine, St. Kyne, St. Giles, St. Aristell, St. Blazey, St. Minver, Relief, Tavernilla, Engineer,* and *Porto Bello;* U. S. S. *Owl, Turkey, Cleveland, Pyro, O-12,* Eagle *No. 4,* and Eagle *No. 12;* Army transports *Santa Leonora* and *Madawaska,* tug *Sciota;* schooner *Arabia;* barges *Darien* and *Mamei;* craneboat *La Valley*; scow *No. 139;* dredge *Gamboa;* U. S. piledriver *No. 2;* launches *Conroy, Activo, Dixie,* and *Azimuth.*

The output of the Mechanical Division in patterns and castings as compared with the preceding month, was as follows:

	October.			November.		
	Patterns.	Castings.	Pounds.	Patterns.	Castings.	Pounds.
Iron	45	2,848	104,038	37	1,722	59,466
Steel	17	1,506	135,813	23	633	60,969
Brass	25	1,179	13,766	33	1,410	25,763

The routine inspection, hostling, and repair of equipment for the Panama Railroad was carried on during the month together with the instruction of crews in handling locomotives and in oil and fuel economy.

BUILDING CONSTRUCTION.

The following statement represents the degree of completion, November 30, of the more important work under construction by the Building Division:

	Per cent completed.
Silver townsite, Mount Hope:	
Commissary	99
Twenty-one 12-family married quarters	100
Fourteen 12-family married quarters	[1]99
Four 12-family married quarters	[1]95
Two 32-room bachelor quarters	[1]99
Two 32-room bachelor quarters	95
Two 32-room bachelor quarters	85
Two 32-room bachelor quarters	80
Two 32-room bachelor quarters	75
Combination shop and warehouse, Cristobal	([2])
Cristobal incinerator	100
Royal Mail Steam Packet Company's office, Cristobal	56
Applying specification roofing to Pier No. 6, Cristobal	[1]75
National Catholic War Council building, Balboa	80
Bake shop, workroom, and storage room, Ancon Hospital	99
Construction of additional room, Ancon Hospital laboratory	100
Painting silver quarters, Gatun	5
Installation of refrigerator, Corozal dairy	98
Alteration of old fire station, Ancon	100
Reroofing Cristobal bakery	60
Installation oil-burning system, Hotel Washington	100
Repairs to 35 houses, Cristobal	20
Painting 36 houses, Gatun	5
Construction of storehouse for quarantine officer, Cristobal	20
Manufacturing 250 chairs	50

[1] Indicates that no work was done during the month.
[2] Completed except for installation of elevator.

Construction work for the Army and Navy is separately reported.

DREDGING DIVISION.

Dredging operations were resumed at Cucaracha Slide on the 15th of the month, owing to another general movement over this area, which occurred on the night of the 14th. Since that time one dipper dredge has worked continuously on a double-shift basis, removing from this slide 59,600 cubic yards of material. Another general movement started on the last day of the month, but all material coming into the Canal at

this point has been confined to the basin and has not interfered in any way with Canal traffic. Including the excavation for November, the dredges have removed a total of 2,127,600 cubic yards of earth and rock from this area since the slide of February 22, 1920. Both Culebra and Barge Repair slides showed some slight surface movement during the month.

At the Pacific entrance of the Canal, 75,000 cubic yards of earth, classified as maintenance work, were removed from the west side and center line of the Canal. In the Chagres River 25,200 cubic yards of mud were removed in uncovering new gravel beds, and deepening channel to the beds. At the Atlantic terminal a total of 75,400 cubic yards of material was removed and dumped between the east end of East Breakwater and Margarita Point.

The total excavation for November, including earth and rock, was 373,600 cubic yards, as follows:

Cubic yards.	Classified as—		Character of work.	Stations.	Equipment
	Earth.	Rock.			
				Gaillard Cut (Cucaracha).	
[1] 40,400	2,000	38,400	Maintenance.....	1805-00 to 1814-00 E.....	*Paraiso.*
[1] 19,200	.....	19,200	Maintenance.....	1805-00 to 1814-00 E.....	*Cascadas.*
				Gaillard Cut (Culebra slide, E and W).	
[1] 43,200	10,800	32,400	Maintenance.....	1761-50 to 1770-00 E.....	*Paraiso.*
[1] 12,000	10,500	1,500	Maintenance.....	1794-50 to 1790-00.....	*No. 86.*
				Gaillard Cut (East Culebra).	
[1] 17,600	3,500	14,100	Maintenance.....	1771-00 to 1776-75.....	*Gamboa.*
				Gaillard Cut.	
[1] 36,400	36,400	.....	Maintenance.....	1855-00 to 1862-50.....	*No. 86.*
				1834-00 to 1836-50.....	
				Gatun Lake Section.	
[2] 29,200	29,200	.....	Maintenance.....	1434-00 to 1441-00 W.....	*No. 86.*
				Pacific Entrance.	
[3] 75,000	75,000	.....	Maintenance.....	2226-00 to 2241-00 W.....	*No. 84.*
				O. M. M.—1705.	
[4] 19,700	10,000	9,700	Aux. construction..	Area No. 12, Cristobal.....	*Gamboa.*
[4] 49,400	25,000	24,400	Aux. construction..	Area No. 6-A, Cristobal.....	*Gamboa.*
[4] 6,300	5,800	500	Aux. construction..	Pier No. 10, Cristobal.....	*Gamboa.*
				Chagres River.	
[5] 25,200	25,200	.....	Aux. construction..	Gravel beds and channel.....	*Marmol.*
373,600	233,400	140,200			

[1] Gaillard Cut. [2] Gatun Lake section. [3] Pacific entrance. [4] Atlantic terminals. [5] Chagres River.

The material excavated at the various stations was disposed of as follows:

	Cubic yards.
North of Gamboa	149,600
Rio Grande Valley	48,400
San Juan Fill	75,000
Between east end East Breakwater and Margarita Point	75,400
Chagres River	25,200
Total	373,600

The following excavation remained to be done on December 1, 1920:

Location.	Earth.	Rock.	Total.
	Cu. yds.	*Cu. yds.*	*Cu. yds.*
Gaillard Cut	.....	25,000	25,000
Pacific entrance	47,500	80,900	128,400
Total, Canal prism	47,500	105,900	153,400
Balboa inner harbor	92,850	13,400	106,250
Total, ocean to ocean	140,350	119,300	259,650

MUNICIPAL ENGINEERING DIVISION.

The total output of all pumping stations for the month of November was 791,327,975 gallons; that of the 3 filtration plants, 494,823,000 gallons. The consumption of water in Panama City was 89,872,000 gallons, and that for Colon 69,532,000 gallons. Sales of water to 258 vessels at Balboa and Cristobal totaled 14,208,184 gallons.

Construction work, as itemized below, was under progress during the month, with completion on December 1, as shown:

Northern District.

Municipal work, New Cristobal townsite:	Per cent completed.
Grading	50
Roads	[1]97.5
Water lines	[1]72
Sidewalks	[1]86
Sanitary sewers	[1]75

[1] Indicates that no work was done during the month.

	Per cent completed.
Municipal work, new silver townsite, Mount Hope (per cent completion remains same as last month; owing to lack of funds, no further work will be done at present except to connect up completed houses with water and sewer lines).	
Municipal work, Block No. 53, Colon:	
Grading	50
Roads	[1]99
Tracks	[1]99
Water lines	[1]95
Sanitary sewers	[1]98
Storm drains	[1]95
Roads for west half, Colon stables	[1]99
Installation of water and sewer system, new Panama Railroad station at Gatun	100
Construction of sidewalks on Lighthouse and Telephone Row at Gatun	[1]30
Moving water and sewer lines, All-America Cable Co.'s lot at Cristobal	100

Southern District.

Municipal work for 4 type-14 houses, Quarry Heights	95
Storm sewer, Javillo Fill	[1]99
Sewer, Northern Avenue to beach	[1]99.1
Box sewer, Panama Railroad yards	[1]99
Concreting streets, new Santo Tomas Hospital	98
Municipal work for 3 type-16 houses, Balboa	[1]60
Municipal work, National Catholic War Council building	100
Reconstruction of road, Quarry Heights	[1]95
Water and sewer connections to Shrine building, Quarry Heights	95
Box sewer on 13th Street, Panama	[1]99
Construction of road to Paraiso store	81
Sidewalk, Balboa School annex	100
New wash water tank, Miraflores	20
Road from La Boca to oil handling plant	25
Construction of culvert, Miraflores Lake	80

[1] Indicates that no work was done during the month.

Municipal work for the Army and Navy is separately reported.

OCCUPATION OF QUARTERS.

Occupants of Panama Canal and Panama Railroad quarters on November 30, were classified as follows:

	Men.	Women.	Children.	Total.
Americans	3,494	2,233	2,636	8,363
Europeans	162	32	59	253
West Indians	4,728	2,067	4,157	10,952
Totals	8,384	4,332	6,852	19,568

WORKING FORCE.

(Effective November 17, 1920.)

Department or Division.	Gold.	Silver.	Total.
Operation and Maintenance:			
Office	29	38	67
Building Division	198	514	712
Electrical Division	224	249	473
Municipal Engineering	99	973	1,072
Lock Operation	176	565	741
Dredging Division	188	1,121	1,309
Mechanical Division	1,038	1,872	2,910
Marine Division	200	489	689
Fortifications	75	607	682
Totals	2,227	6,428	8,655
Supply Department:			
Quartermaster	205	1,681	1,886
Subsistence	31	369	400
Commissary	304	1,449	1,753
Cattle Industry—Plantations	22	388	410
Hotel Washington	10	92	102
Totals	572	3,979	4,551
Accounting	253	9	262
Health	248	826	1,074
Executive	570	255	825
Panama Railroad:			
Superintendent	76	510	586
Transportation	129	164	293
Receiving and Forwarding Agency	87	1,077	1,164
Coaling Stations	123	767	890
Totals	1,486	3,608	5,094
Grand totals	4,285	14,015	18,300

VITAL STATISTICS.

A total of 177 deaths occurred during the month of November from the population comprising the Canal Zone and the cities of Panama and Colon. Of the above deaths, 58, or 33 per cent, occurred among children under 5 years of age. Tuberculosis, diarrhea and enteritis, and pneumonia, with 39, 17, and 11 deaths, respectively, were the leading causes of mortality in the order named. Eighty-one cases of malaria were reported, with 2 deaths. Diphtheria and para-typhoid fever each caused 1 death. Of all deaths, 16 were due to external causes. There were 11 deaths among nonresidents on the Isthmus; these deaths are not included in the above statistics.

Three hundred and forty-three births were reported during the month, 22 of which were stillbirths. Deaths among children under 1 year of age numbered 41, giving an infant mortality rate, based on the number of births reported for the month, of 127.7.

No quarantinable diseases originated on the Isthmus or arrived at Canal Zone ports during the month.

RECEIPTS AND SALES OF MATERIALS AND SUPPLIES.

The total value of the material ordered on United States requisitions and received on the Isthmus during November was $1,301,814.47. Of this material, $1,271,100.48 was chargeable to Operation and Maintenance, $15,586.13 to Construction and Equipment, and $15,127.86 to miscellaneous departments.

The total cash sales on the Isthmus from storehouses and obsolete stores for the month amounted to $120,204, of which $30,996.87 was for stock, $87,063.73 for fuel oil, $1,408.56 for scrap, and $734.84 for obsolete and second-hand material.

Sales to steamships from storehouses amounted to $78,377.02, of which $17,922.57 was for miscellaneous stock items, and $60,454.45 for fuel oil. Total sales of commissary supplies to all purchasers amounted to $945,437.03, made up as follows: To steamships other than United States Government vessels and those of the Panama Railroad Steamship Line, $85,649.75; to The Panama Canal, $130,757.23; to the United States Government, including the Army and Navy, $102,526.81; to individuals and companies, mainly through charge accounts at the retail commissaries, $26,259.97; to the Panama Railroad, including its steamships and the Hotel Washington, $42,360.69; and to individuals purchasing coupons, $557,882.58.

FINANCIAL RECEIPTS AND EXPENDITURES.

The cash balance in Canal appropriations on November 30, exclusive of Fortifications, was $15,634,339.64. The balance in Fortification funds allotted to The Panama Canal for expenditures was $1,060,797.43. Payments from appropriations made by the Disbursing Clerk, Washington, amounted to $1,037,499.84, and by the Paymaster on the Isthmus to $1,534,678.48. Purchases of commissary books from the Panama Railroad Company amounted to $348,053.87.

The total Canal collections on the Isthmus amounted to $2,341,314.80, and were classified as follows:

Repaid to appropriations	$1,042,453.79
Commissary and other trust funds	349,975.69
Tolls	933,926.51
Water rentals, Panama and Colon	1,347.50
Postal receipts	9,411.20
Licenses, taxes, court fees, fines, etc	4,200.11
Total	$2,341,314.80

Collections by the Disbursing Clerk, Washington, amounted to $12,515.38. Deposits of $61,400 were made with the Assistant Treasurer of the United States to be applied on payment of tolls and other charges against vessels using the Canal. Receipts from Canal Zone and miscellaneous funds amounted to $199,793.91; disbursements from the same source were $76,098.06.

November payrolls on the Isthmus aggregated $1,281,044.90, as compared with $1,352,130.61 for October, a decrease of $71,085.71.

Respectfully,

JAY J. MORROW.
Acting Governor.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Distribution of cargo passing through the Canal from the Pacific to Atlantic, November, 1920.

From—	North America.								Europe.														
	United States.																						
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States	Atlantic terminus, Panama Canal.	West Indies.	East coast of U. S.[2]	Total, North America.	British Isles.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Portugal.	Spain.	European ports.[3]	Total, Europe.	East coast, South America.	Grand totals.	Per cent of total cargo.
South America:																							
Chile	19,922	61,361	9,529	90,812	173	.....	.....	90,985	9,343	7,750	136	8,277	.....	5,473	.....	.....	32,044	10,820	73,843	.....	164,828	33.4
Colombia	.....	.....	.....	.....	1,452	.....	.....	1,452	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,452	0.3
Ecuador	1,180	.....	.....	1,180	2,113	.....	.....	3,293	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	.....	3,304	0.7
Peru	5,837	.....	.....	5,837	7,272	.....	.....	13,109	10,840	.....	1,027	1,083	.....	.....	.....	.....	.....	.....	12,950	.....	26,059	5.3
[1]West coast of South America	128	.....	.....	128	49	.....	.....	177	1,393	.....	.....	847	.....	.....	.....	.....	.....	2,017	4,257	.....	4,434	0.9
Total, South America	27,067	61,361	9,529	97,957	11,059	.....	.....	109,016	21,587	7,750	1,163	10,207	.....	5,473	.....	.....	32,044	12,837	91,061	.....	200,077	40.5
North America:																							
West coast of United States	36,295	322	1,064	37,681	2,235	7,564	16,054	63,534	55,542	1,287	.....	3,749	24,414	.....	4,551	19,855	7,187	832	117,417	5,610	186,561	37.8
West coast of Canada	2,497	.....	.....	2,497	.....	400	.....	2,897	7,872	.....	632	.....	.....	.....	.....	.....	.....	.....	8,504	.....	11,401	2.3
West coast of Central America	.....	.....	.....	.....	1,502	.....	.....	1,502	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,502	0.3
[2]West coast of North America	.....	.....	.....	.....	369	.....	.....	369	6,860	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,860	.....	7,229	1.5
Total, North America	38,792	322	1,064	40,178	4,106	7,964	16,054	68,302	70,274	1,287	632	3,749	24,414	.....	4,551	19,855	7,187	832	132,781	5,610	206,693	41 9
Asia:																							
China	11,641	.....	.....	11,641	.....	1,332	.....	12,973	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12,973	2.6
Japan	1,803	.....	.....	1,803	.....	81	.....	1,884	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,884	0.4
Indo-China Malay peninsula	1,416	.....	.....	1,416	.....	.....	.....	1,416	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,416	0.3
Philippines	7,082	.....	.....	7,082	.....	.....	.....	7,082	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,082	1.4
East Indies	7,100	.....	.....	7,100	.....	.....	.....	7,100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,100	1 4
[2]Far East	6,372	.....	.....	6,372	.....	1,340	.....	7,712	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,712	1.6
Total, Asia	35,414	.....	.....	35,414	.....	2,753	.....	38,167	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38,167	7.7
Australia:																							
Australia	500	.....	.....	500	.....	.....	.....	500	4,812	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,812	.....	5,312	1.1
New Zealand	7,123	.....	.....	7,123	.....	.....	.....	7,123	36,429	.....	.....	.....	.....	.....	.....	.....	.....	.....	36,429	.....	43,552	8.8
Total, Australasia	7,623	.....	.....	7,623	.....	.....	.....	7,623	41,241	.....	.....	.....	.....	.....	.....	.....	.....	.....	41,241	.....	48,864	9.9
Grand totals	108,896	61,683	10,593	181,172	15,165	10,717	16.054	223,108	133,102	9,0[illegible]7	1,795	13,956	24,414	5,473	4,551	19,855	39,231	13,669	265,083	5,610	493,801	100.0
Per cent of total cargo	22.1	12.5	2.1	36.7	3.1	2.2	3.2	45.2	26.9	1.8	0.4	2.8	4.9	1.1	0.9	4.0	8.0	2.8	53.7	1.1	100.0	.....
Percentage last month	21.4	12.5	4.5	38.4	4.6	1.4	.....	45.6	36.2	0.5	3.1	2.6	2.0	1.1	2.9	.....	3.2	.....	51.6	.....	100.0	.....

[1] By long tons, 2,240 pounds. [2] For orders. [3] General cargo, not routed so as to allow segregation among various ports.

Distribution of cargo passing through the Canal from the Atlantic to the Pacific, November, 1920.[1]

From—	South America.							North America.					Asia.					Australasia.					
	Chile.	Colombia.	Ecuador.	Peru.	West coast, South America.[2]	East coast, South America.	Total, South America.	West coast, United States.	West coast, Central America	West coast, Canada.	West coast, North America.[2]	Total, North America.	China.	Japan.	Philippines.	Far East.[2]	Total, Asia.	Australia.	New Zealand.	Australasia.[2]	Total, Australasia.	Grand totals.	Per cent of total cargo.
North America:																							
United States—																							
North Atlantic ports	5,386	1,169	1,225	1,924	26,361	.....	36,065	39,554	.....	10,000	8,832	58,386	3,798	2,910	9,906	23,906	40,502	25,370	17,133	22,521	65,024	199,995	40.7
South Atlantic ports	54,356	.....	.....	6,695	9,700	2,700	73,451	8,600	.....	.....	.....	8,600	.....	.....	.....	1,115	1,115	.....	14,090	.....	14,090	97,256	19.8
Gulf ports	1,192	.....	90	1,580	.....	.....	2,862	1,762	.....	.....	.....	1,762	8,807	7,751	70	347	16,975	17,120	.....	5,250	22,370	43,969	8.9
Total, United States	60,934	1,169	1,315	10,199	36,061	2,700	112,378	49,916	.....	10,000	8,832	68,748	12,605	10,661	9,976	25,368	58,610	42,490	31,223	27,771	101,484	341,220	69.5
Panama Canal, Atlantic terminus:	736	1,173	793	825	1,343	.....	4,870	1,789	3,602	.....	.....	5,391	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,261	2.1
Mexico	53,200	.....	.....	.....	.....	.....	53,200	20,000	.....	.....	.....	20,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	73,200	14.9
Canada	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,795	.....	3,795	3,795	0.7
North America	114,870	2,342	2,108	11,024	37,404	2,700	170,448	71,705	3,602	10,000	8,832	94,139	12,605	10,661	9,976	25,368	58,610	42,490	35,018	27,771	105,279	428,476	87.2
Europe:																							
British Isles	930	.....	.....	4,762	9,854	.....	15,546	1,338	1,538	.....	.....	2,876	.....	.....	.....	.....	.....	12,036	15,208	.....	27,244	45,666	9.3
Denmark	4,000	.....	.....	.....	.....	.....	4,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,000	0.8
France	468	.....	185	311	.....	.....	964	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	964	0.2
Holland	.....	.....	.....	.....	.....	.....	.....	1,664	.....	.....	.....	1,664	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,664	0.3
Italy	2,309	.....	50	.....	.....	.....	2,359	.....	.....	368	.....	368	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,727	0.6
Norway and Sweden	446	.....	.....	25	1,287	.....	1,758	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,758	0.4
*Europe	.....	.....	.....	.....	3,325	.....	3,325	836	.....	.....	.....	836	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,161	0.8
Total, Europe	8,153	.....	235	5,098	14,466	.....	27,952	3,838	1,538	368	.....	5,744	.....	.....	.....	.....	.....	12,036	15,208	.....	27,244	60,940	12.4
East coast of South America	.....	.....	.....	.....	.....	.....	.....	1,693	.....	.....	.....	1,693	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,693	0.4
Grand totals	123,023	2,342	2,343	16,122	51,870	2,700	198,400	77,236	5,140	10,368	8,832	101,576	12,605	10,661	9,976	25,368	58,610	54,526	50,226	27,771	132,523	491,109	100.0
Per cent of total cargo	25.0	0.5	0.5	3.3	10.6	0.5	40.4	15.7	1.0	2.1	1.8	20.7	2.6	2.2	2.0	5.2	11.9	11.1	10.2	5.7	27.0	100.0	.....
Percentage last month	31.6	1.1	0.5	3.0	2.6	.....	38.8	12.2	0.3	0.7	.....	15.4	10.0	3.2	0.5	12.0	25.7	9.1	8.5	2.5	20.1	100.0	....

[1] By long tons, 2,240 pounds.

[2] General cargo not routed so as to allow segregation among various countries.

PANAMA RAILROAD PASSENGER TRAIN TIME-TABLE No. 31, EFFECTIVE JANUARY 9, 1921.

MAIN LINE STATIONS.	Daily except Sat'day	Sunday only.	Sat'day only.	DAILY.		
	101	11	9	7	5	3
Leave	P. M.	P. M.	P. M.	P. M.	A. M.	A. M.
Colon	11 15	9.35	11.30	5.00	11.00	7.10
Mount Hope	11.20	9 40	11.35	5 05	11.05	7.15
Fort Davis	11 28	9.49	11 44	5.14	11.14	7.24
Gatun	11.40	9.54	11.49	5.19	11.19	7.29
			A. M.			
Monte Lirio	11 55	10 09	12 04	5.34	11.34	7.44
	A. M.					
Frijoles	f12 10	10 19	12 15	5.45	11.45	7.55
Darien	f12.18	10 26	12.22	5.52	11.52	8.00
					P. M.	
Gamboa	12.30	10.37	12 33	6.04	12.04	8.16
Summit	f12.42	10 49	12.45	6.16	12 16	8.32
Pedro Miguel	1.00	11 01	12 57	6 26	12 28	8 46
Red Tank	1.03	11 04	1 00	6.28	12.31	8 49
Miraflores Locks	f1.16	11.09	1 05	6.32	12.35	8.53
Fort Clayton	1.18	11 11	1.07	6.35	12.38	8.56
Corozal	f1 25	11 14	1 10	6 40	12.44	9.00
Balboa Heights	1.30	11 20	1 15	6 45	12.50	9.05
Panama	1.35	11 25	1 20	6 50	12 55	9.10
Arrive	A. M.	P M.	A M.	P. M.	P. M	A. M.
	101	11	9	7	5	3

MAIN LINE STATIONS.	DAILY.			Sat'day only.	Sunday only.
	4	6	8	10	12
Leave	A. M.	A. M.	P. M.	P. M.	P. M.
Panama	7.10	11.00	5.00	11.30	9.35
Balboa Heights	7.15	11.05	5.05	11.35	9.40
Corozal	7.21	11.12	5.10	11.41	9 46
Fort Clayton	7 25	11.16	5.14	11.44	9.49
Miraflores Locks	7.28	11.19	5 17	11.46	9.51
Red Tank	7.32	11.22	5.21	11.49	9.54
Pedro Miguel	7.36	11.25	5.25	11.53	9.58
				A. M.	
Summit	7.48	11.37	5.37	12.05	10.10
Gamboa	8.00	11.49	5.49	12.17	10.22
Darien	8.09	11.59	5.59	12.28	10.32
		P. M.			
Frijoles	8.17	12.07	6.07	12.35	10.39
Monte Lirio	8.29	12 19	6.18	12.46	10.50
Gatun	8.44	12 34	6.34	1.01	11 05
Fort Davis	8.48	12 38	6 38	1.03	11.08
Mount Hope	8 55	12 45	6.45	1 10	11.15
Colon	9 00	12.50	6.50	1.15	11.20
Arrive	A. M.	P. M	P. M.	A. M.	P. M.
	4	6	8	10	12

All trains stop where time is shown except f indicates stop on signal only.

Sunday only	DAILY			Daily except Sunday	DAILY			
67	65	63	61	59	57	55	53	51
A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.	A. M.	A M
12.30	11.05	7.30	5.30	3 30	1 00	10 00	7 45	6 10
12.32	11 07	7 32	5.32	3 32	1 02	10 02	7.47	6.12
12.34	11 09	7.34	5.34	3 34	1 04	10 04	7.49	6.14
12.37	11.12	7.37	5.37	3.37	1.07	10.07	7.52	6.17
.....	.....	.....	.....	.....	.....	.....	.....	.....
12 43	11.18	7 43	5 43	3 43	1.13	10 13	7.58	6.23
12 49	11.24	7 49	5 49	3 49	1.19	10 19	8.04	6.29
12.55	11.30	7 55	5.55	3.55	1 25	10 25	8.10	6 35
A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.	A M.	A M.
67	65	63	61	59	57	55	53	51

FORT RANDOLPH BRANCH STATIONS	DAILY				Daily except Sunday	DAILY			Sunday only
	52	54	56	58	60	62	64	66	68
Leave **Arrive**	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.
Third Street, Colon	7 05	8.40	10.55	1.55	4 25	6.25	8 25	11.59	1 25
Seventh Street	7 03	8 38	10 53	1 53	4 23	6.23	8.23	11 57	1.23
Cristobal Commissary	7 01	8 36	10.51	1.51	4 21	6.21	8.21	11.55	1.21
Tower "B"	6 58	8.33	10.48	1.48	4.18	6.18	8.18	11.53	1.18
Diversion Bridge	.....	.....	.....	.....	.....	.....	.....	.....	.....
France Field	6 50	8 25	10 40	1 40	4 10	6 10	8.10	11.45	1.10
Coco Solo Station	6 45	8 20	10 35	1 35	4 05	6 05	8.05	11 40	1 05
Fort Randolph	6 40	8 15	10.30	1 30	4 00	6 00	8 00	11 35	1 00
Arrive **Leave**	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.
	52	54	56	58	60	62	64	66	68

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, January 1, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Viborg	25	16.40	26	6.37	26	14.05	26	15.23	Danish	C. K. Hansen	283.0	42.0	19.6	Norfolk	Tocopilla	Coal	2,779	2,578	1,795
Montrolite	26	6.00	26	7.19	26	17.12	26	18.50	American	Standard Oil Co	419.0	57.0	25.8	Tampico	San Francisco	Naphtha, distil'd.	8,000	7,378	5,476
Laura C. Hall [1]	21	7.55	26	7.23	26	16.59	27	23.20	British	Pacific Metals Corporation	82.0	25.0	10.6	Cristobal	Buenaventura	General	13	130	69
Neches	26	6.25	26	7.40	26	18.04			American	United States Navy	475.0	55.0	23.9	Port Arthur	Balboa	Fuel oil	7,401	5,620	4,124
Craster Hall	26	6.19	26	9.45	26	20.10	27	13.14	American	United States Steel Products Co.	380.0	50.0	24.0	Norfolk	Yokohama	Steel and cotton.	5,922	4,955	3,523
Canadian Trooper	26	11.35	26	12.54	26	20.25	26	21.30	British	Canadian Government	333.0	44.0	22.6	Baltimore	Callao	Coal	3,290	3,213	2,100
Orbita	24	21.28	26	13.15	26	21.37	26	22.22	British	Pacific Steam Navigation Co	350.0	67.0	24.6	Liverpool	Valparaiso	General	1,843	16,822	11,508
Launch No. 1409			26	7.23	26	16.59	26	22.22	American	G. O'Barrio				Cristobal	Buenaventura.	Ballast		5	3
Ruahine	26	14.00	27	6.14	27	13.30	27	14.40	British	New Zealand Shipping Co	480.0	60.0	27.1	London	Wellington	Gen. merchandise	6,373	1,197	8,322
Alloway	26	20.05	27	6.19	27	14.32	27	21.02	American	Barber Steamship Co	416.0	53.0	25.8	New York	Yokohama	Gen., case oil	7,965	6,576	4,886
Songdal	26	19.40	27	6.21	27	15.31	27	17.10	Norwegian	S. O. Stray & Co	330.0	47.0	23.0	New York	Callao	Gen., coal, coke.	4,449	3,768	2,532
Acajutla	23	10.10	27	6.25	27	14.25	27	17.00	British	Pacific Steam Navigation Co	215.7	33.5	16.5	Cartagena	Buenaventura.	Gen., salt	744	1,273	706
Apus	27	6.51	27	8.27	27	16.25	27	23.15	American	Green Star Line (S. B.)	401.0	53.2	23.8	Norfolk	Far East	General	5,754	7,082	5,167
Kelbergen	27	3.05	27	9.25	27	17.34	28	3.00	Dutch	N. V. Zuid H. S. Maatschappid	392.0	51.9	13.0	W. Hartlepool	Astoria	Ballast		5,341	3,856
Trontolite	27	11.32	27	12.00	27	20.12	28	10.10	American	Standard Oil Co	419.4	57.2	27.0	Point Lobos	Talara	Crude oil	9,405	7,345	5,428
West Isleta	27	12.46	27	13.10	27	20.55	27	22.07	American	North Atl. & Western Co. (S.B.)	409.8	54.2	21.0	Philadelphia	Portland	Steel and general	3,605	6,759	4,900
Sciota [2]			27	7.20	27	15.21			American	United States Navy				Cristobal	Balboa				
Balboa	8	16.50	28	6.13	28	13.55	28	21.35	American	Colombian Maritime Co	190.0	29.1	12.8	Cristobal	Buenaventura.	General	111	741	350
Whippoorwill [3]	16	18.33	28	6.20	28	15.05	28	16.30	American	United States Navy	187.0	36.0	13.6	Guantanamo	San Diego				
Essequibo	27	13.33	28	7.24	28	14.13	28	21.53	British	Pacific Steam Navigation Co	450.0	58.0	26.0	New York	Valparaiso	General	2,455	9,037	6,089
Peru	22	16.52	28	10.16	28	17.09	28	20.22	British	Pacific Steam Navigation Co	350.0	43.1	19.0	Cristobal	Valparaiso	General	1,072	4,095	2,655
Tiltil	28	13.55	29	6.17	29	14.32	30	19.55	Chilean	Indies Navigation Co	290.0	38.1	20.0	Baltimore	Valparaiso	Coal		2,474	1,640
Chiquimula [4]	27	7.45	29	6.19	29	15.10	29	16.20	American	Chiquimula Shipping Corporation	176.0	36.0	15.6	Mobile	La Union	R. R. material	890	716	530
Seattle Maru	29	2.55	29	6.55	29	14.45	29	18.54	Japanese	Osaka Shosen Kaisha	410.0	50.0	22.0	New Orleans	Kobe	Steel and cotton.	3,349	6,226	4,001
Point Bonita	28	10.22	29	11.18	29	18.19	29	19.15	American	Pacific Mail Steamship Co	289.0	44.0	15.6	Baltimore	San Francisco.	Steel, general	1,877	2,895	1,993
Point Adams	24	18.43	29	11.55	29	19.12	30	22.44	American	Pacific Mail Steamship Co	289.0	44.0	20.8	Baltimore	San Francisco.	Steel, general	3,489	2,899	1,971
Breckenridge [5]			29		29	8.22			American	United States Army				Cristobal	Gatun Lake				
Cauca	24	17.32	30	6.22	30	13.15	30	15.02	British	Pacific Steam Navigation Co	246.0	35.0	14.6	Cristobal	Guayaquil	General	172	1,582	1,023
Standard Arrow	29	19.30	30	6.32	30	14.40	30	15.48	American	Standard Transportation Co	467.6	62.7	24.0	Beaumont	Hongkong	Oil	10,900	9,931	7,019
Huasco	28	16.36	30	11.02	30	18.33	30	20.12	Chilean	South American Steamship Line.	379.0	44.0	22.3	Cristobal	Valparaiso	General	292	4,552	3,182
Ucayali	19	16.05	30	11.06	30	17.45	31	22.04	Peruvian	Peruvian Line	375.0	46.0	18.6	Cristobal	Callao	General	1,408	4,466	2,405
Iris	30	6.56	30	13.07	30	20.50	30	21.38	American	Swayne & Hoyt	304.0	38.8	22.0	New Orleans	San Francisco.	General	2,704	3,030	2,021
Bahia Castillo	28	16.10	31	7.17	31	16.02	31	17.20	British	George Thompson	491.6	59.1	21.8	London	Melbourne			11,128	8,436
Edsall No. 219 [6]	31	2.30	31	8.25	31	16.48	3	14.18	American	United States Navy	314.0	31.0	11.0	Key West	San Diego				
Calcutta Maru	31	10.27	31	10.48	31	17.40	31	18.52	Japanese	Nippon Yusen Kabushiki Kaisha	400.0	54.0	24.0	New York	Shanghai	General	6,283	5,790	4,183

[1] Power schooner. [2] Tug, towing target raft *No. 41* to Gatun. [3] Mine sweeper, towing barge *No. 2*. [4] Motor schooner. [5] Launch. [6] Destroyer.

Brookline	31	11.05	31	11.23	31	19.08	31	20.22	American	E. C. Evans (S. B.)	410.0	54.0	24.0	Norfolk	Bremerton	Coal	7,193	6,576	4,852
Anten	31	7.15	31	12.37	31	20.24	31	21.25	Swedish	Swedish Transatlantic Co	420.0	54.0	23.6	Norfolk	Wellington	Coal	9,255	7,059	5,226
Essex	31	17.15	1	6.22	1	14.30	1	16.05	British	Federal Steam Navigation Co	460.0	58.0	29.0	New York	Adelaide	General	8,672	9,158	6,500
Akita Maru	31	16.18	1	6.45	1	15.36	1	17.45	Japanese	Nippon Yusen Kabushiki Kaisha	345.0	50.0	22.7	New York	Kobe	Steel, cotton, gen	4,449		
Cordelia	31	19.55	1	6.58	1	16.02	2	9.30	British	C. T. Bowring & Co	420.3	54.0	27.0	Tampico	Los Angeles	Fuel oil	9,000	6,690	4,963
Spes	31	9.00	1	8.00	1	17.05	1	18.00	Norwegian	S. O. Stray & Co	220.0	36.0	15.6	Baltimore	Guayaquil	Coal	1,548		

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Jamaica	25	15.05	26	6.21	26	13.50	2	10.15	British	Pacific Steam Navigation Co	220.0	34.0	10.0	Champerico	Cristobal	General	30	1,187	622
Tainui	25	11.00	26	6.38	26	14.40	26	14.40	British	Shaw, Savill & Albion Co	477.8	61.1	25.6	Auckland	London	Frozen, general	4,820	10,631	7,606
Durango	24	22.25	26	7.21	26	16.12	26	19.45	American	Struthers & Dixon (S. B.)	435.0	56.0	18.0	San Francisco	Tecomate	Ballast		7,642	5,327
Amalienborg	25	15.15	26	7.37	26	16.55	26	17.50	Danish	C. K. Hansen	311.1	45.8	21.0	Taltal	Vykobing, Den	Nitrate of soda	4,564	3,567	2,460
Saint Joseph	25	17.55	26	7.44	26	18.07	27	12.00	French	French Line	398.0	50.3	23.9	Talcahuano	Havre	Nitrate, general	6,096	5,979	4,170
Chile	25	19.25	26	8.39	26	17.25			British	Pacific Steam Navigation Co	350.2	43.0	18.6	Coronel	Cristobal	General	623	4,065	2,668
Charlton Hall	25	19.30	26	9.35	26	18.40	26	21.30	American	Isthmian Steel Products Co	400.0	50.0	25.0	Antofagasta	New York	Nitrate	7,200	5,696	4,267
Statesman	26	4.15	26	10.27	26	18.45	26	23.33	British	Harrison Line	423.3	53.0	24.6	San Francisco	London	General	7,000	6,361	4,592
Leitrim	25	22.30	26	11.09	26	19.25	27	5.45	British	Union S. S. Co. of New Zealand	470.0	60.2	23.8	Auckland	New York	General, frozen	5,200	10,050	6,794
Lake Fithian	26	9.00	26	14.13	26	22.45	27	11.55	American	N. O. & S. A. S. S. Co. (S. B.)	253.4	43.8	24.2	Iquique	New Orleans	Nitrates	3,711	2,915	1,907
Pulaski	26	19.50	27	6.36	27	15.18	27	19.45	American	Caribbean S. S. Co. (S. B.)	251.0	43.6	20.0	Guayaquil	New York	Cacao	2,180	2,823	1,744
Kent	26	22.30	27	7.58	27	16.40	27	17.50	British	Federal Steam Navigation Co	460.6	62.8	24.6	Lyttleton	New York	Frozen and wool	5,520	10,503	8,121
Pedro Christophersen[7]	27	13.30	28	7.06	28	14.30	28	14.30	Swedish	Johnson Line	360.2	51.7	23.2	Antofagasta	Gothenburg	Nitrates	5,700	5,281	4,013
Frederick Luckenbach	28	1.05	28	7.57	28	15.40	28	17.40	American	Luckenbach Line	317.5	40.2	23.0	San Francisco	Philadelphia	General	3,000	2,986	2,091
Huasco	28	5.00	28	9.40	28	16.36	30	11.02	Chilean	South American Steamship Line	379.7	44.3	19.0	Valparaiso	Cristobal	General	6	4,552	3,182
Ardmore	20	13.00	29	6.36	29	14.48	29	14.48	American	Standard Oil Co	449.6	50.1	18.0	Iquique	Tampico	Ballast		8,636	6,321
Hvidehavet	29	4.00	29	8.07	29	15.50	29	17.03	Danish	Atlanterhavet Steamship Co	324.2	48.7	19.6	Taltal	Norfolk	Nitrates	4,350	3,457	2,381
Eastern Temple	28	17.20	30	8.35	30	16.55	30	18.07	American	McCormick & McPherson (S.B.)	315.9	45.8	23.0	Mejillones	Baltimore	Nitrates	4,514		
West Togus	31	6.30	31	8.19	31	16.00	31	16.15	American	N. Atl. & West'n S. S. Co. (S.B.)	409.8	54.2	22.6	Seattle	Philadelphia	Lumber, general	6,262	6,589	4,838
Sciota[8]	27	15.21	31	10.20	31	15.55			American	U. S. Navy	125.0	30.0		Las Palmas	Cristobal				
Sorethavet	31	14.40	1	6.29	1	14.37	1	14.37	Danish	Atlanterhavet Steamship Co	325.0	46.8	19.6	Taltal	Norfolk	Nitrates	4,163		
Salvador	31	17.05	1	6.44	1	13.43			British	Pacific Steam Navigation Co	215.0	33.5	12.3	Champerico	Cristobal	Coffee, general	99	1,213	692
Steel Ranger	1	1.00	1	7.49	1	16.33	1	17.13	American	United States Steel Products Co	424.2	56.2	23.6	San Francisco	New York	Lumber, general	6,500		
Eelbeck	1	4.41	1	12.14	1	20.25	1	20.25	American	Williams, Dimond & Co. (S. B.)	401.7	54.8	25.0	Portland	Glasgow	General	6,272	6,928	5,103

[7] Motor ship. [8] Tug. Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
December 26.	Pastores	United Fruit Co	Port Limon.
December 28.	Gen. G. W. Goethals.	Panama Railroad Steamship Line	New York via Haiti.
December 28.	Ulua	United Fruit Co	New York via Habana.
December 28.	Heredia	United Fruit Co	New Orleans.
December 29.	Metapan	United Fruit Co	New Orleans and way-ports.

*DEPARTURES.

Date.	Vessel.	Line.	For—
December 26.	Pastores	United Fruit Co	New York via Habana.
December 26.	Caribbean	Panama Railroad Cattle Industry	Cartagena.
December 27.	Alexandrian	Leyland Line	Mobile.
December 29.	Metapan	United Fruit Co	New Orleans.
December 29.	Heredia	United Fruit Co	New Orleans via Bocas del Toro and Habana.

(Continued on page 304, column 2.)

Official Circulars.

1920 Annual Pass Extended.

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., December 23, 1920.

All concerned—All annual passes over the Panama Railroad for the year ending December 31, 1920, will be honored thereafter until further notice.

S. W. HEALD,
Superintendent.

Las Cascadas Branch, Panama Railroad, Discontinued.

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., December 24, 1920.

All concerned—All Las Cascadas branch line trains, on both sides of the Canal, will be discontinued after January 1, 1921.

S. W. HEALD,
Superintendent.

Sailing of the "Panama."

PANAMA RAILROAD STEAMSHIP LINE,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., December 29, 1920.

To all concerned—The steamship *Panama* will sail from Cristobal for New York via Port au Prince, Haiti, at 3 p. m., Friday, January 7.

S. W. HEALD,
Superintendent.

Sale of Second-hand Roofing Iron and Tar Paper.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., January 15, 1921, for the purchase of about 1,600 pieces of used corrugated roofing iron and about 30 rolls of tar paper at Cristobal. Form of proposal may be had upon application. The Panama Canal reserves the right to reject any or all bids.

Sale of Wooden Barge.

Bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., for the purchase of "Moran dump barge *No. 145*," beached at Farfan, on basis of purchasing the barge "as is, where is." First satisfactory offer received will be considered.

Additions to Commissary Stock.

Dry Goods Section.

Handkerchiefs, cotton, Irish, embroidered, ea	$0.20
Handkerchiefs, cotton, Irish, embroidered, ea	.40
Handkerchiefs, cotton, Irish, embroidered, ea	.49
Handkerchiefs, cotton, Irish, embroidered, ea	.42

Hardware Section.

Cases, blouse, 18", ea	11.05
Cases, blouse, 20", ea	13.55
Clippers, hair, to cut 1/32", ea	4.00
Trunks, hide, cabin, 36", ea	55.35
Trunks, hide, cabin, 36", ea	49.45
Stoves and accessories:	
Tops for 1-burner N. P. stove, ea	1.30
Tops for 2-burner N. P. stove, ea	2.10
Tops for 3-burner N. P. stove, ea	3.00

MOVEMENTS OF OCEAN VESSELS.—Continued from page 303.

PORT OF CRISTOBAL—continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
December 29.	Caldas	Caribbean Steamship Co	New York via wayports.
December 29.	Ulv	O. Kvilhang & Co	New York via wayports.
December 30.	Somme [9]	United States Army	New York.
December 30.	Alianca	Panama Railroad Steamship Line.	Colombian ports.
December 30.	Caribbean	Panama Railroad Cattle Industry.	Cartagena.
December 30.	Patria [10]	Cuban Government	Santiago de Cuba.
December 31.	Ulysses [11]	Panama Railroad Steamship Line.	Norfolk.
December 31.	Panama	Panama Railroad Steamship Line.	New York via Haiti.
December 31.	Cristobal	Panama Railroad Steamship Line.	Norfolk.
January 1	Columbia	N. O. & S. A. Steamship Line	New Orleans and wayports.

[9] Transport. [10] Training ship. [11] And barge *Manet.*

PORT OF BALBOA.

Date.	Vessel.	Line.	From—
December 29.	Tacoma [12]	United States Navy	San Francisco.

[12] Third class cruiser.

*DEPARTURES.

Date.	Vessel.	Line.	For—
December 29.	Ulua	United Fruit Co	Port Limon.
December 30	Caldas	Caribbean Steamship Co	Puerto Colombia.
December 30.	Apalachee	United States Shipping Board	Orange, Tex.
December 30.	Ulv	O. Kvilhang & Co	New York via Colombia.
January 1	Alianca	Panama Railroad Steamship Line.	New York via Haiti.
January 1	Columbia	N. O. and S. A. Steamship Line.	Port Limon.

*Other than ships passing through the Canal.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Volume XIV. Balboa Heights, C. Z., January 12, 1921. No. 22.

The "Sussex Pulled Off of Breakwater and Towed to Dock.

The steamship *Sussex*, which ran on the West Breakwater in Limon Bay in the night of January 3, was pulled off in the morning of January 11 by the tugs *Gorgona* and *Tavernilla* and the salvage steamer *Favorite*, and towed to dock in Cristobal. Over 1,700 tons of cargo had been discharged into lighters from her No. 1 and No. 2 holds before she could be drawn off the rocks.

The *Sussex* is to be taken through the Canal for dry-docking in the 1,000-foot dry dock at Balboa. The dock is, however, engaged until January 23 with vessels ahead of the *Sussex*.

Admiral Line Service Between Europe and the West Coast of North America.

Announcement has been made that the Pacific Steamship Company, operating the Admiral Line, will establish a direct cargo service between ports of northern Europe and the west coast of the United States and Canada. The steamship *Endicott*, which passed through the Canal on December 24, bound from Tacoma for the United Kingdom with 7,481 tons of wheat, is to be used in this service on her return voyage. The *Wawalona* is advertised to sail from Antwerp on January 10 with cargo for the west coast; the *Endicott* on January 30; and the *Eikton* on February 15. No data have been furnished as to later sailings or additional vessels for the line.

Arrival of Squadron of the Chilean Navy.

The battleship *Almirante Latorre* and destroyers *Riveros*, *Uribe*, and *Williams* of the Chilean Navy arrived at Cristobal in the forenoon of January 10 from Port of Spain, Trinidad, on their way from England to Chile. They anchored in the bay and are due to pass through the Canal on January 12. The *Almirante Latorre* is to go into dry dock at Balboa.

Visits of Atlantic and Pacific Fleets.

The Atlantic Fleet of the United States Navy is due to arrive at Cristobal either in the afternoon of January 19, or at daylight the morning of the 20th. It is planned to have the fleet start through the Canal as early as possible the morning of the 20th. The schedule for the cruise to Callao has been advanced 2 days, and both fleets are due to leave Balboa the forenoon of January 22. This means that the Atlantic Fleet will not tarry at Balboa at this time, but will postpone shore liberty until its return, approximately February 18. It is possible that the destroyers of the Atlantic Fleet may be sent ahead, so that they may refuel in advance of the passage of the main fleet. They are the only vessels of the fleet which will need to refuel on the way south.

The supply ship *Neches* arrived at Balboa on December 26 from Port Arthur with 53,100 barrels of fuel oil for the fleet.

It is understood that the Atlantic fleet will consist of 7 first-line battleships, 18 destroyers, 6 seaplanes, and a number of submarines, tenders, hospital, supply, and repair ships, tugs, etc., in all about 54 vessels. The battleships and destroyers, and their accompanying train, are to pass through the Canal immediately for the cruise to the west coast of South America. The Submarine Force, Air Force, Mine Force, and remaining vessels of the train will base on the Canal Zone, during the time of the southern cruise, and the entire fleet is to assemble at Balboa by February 18, when the entire Pacific Fleet will also be there.

The Pacific Fleet is to consist of 8 battleships, 19 destroyers, 6 seaplanes, and 13 other vessels, a total of 46. It cleared for the Canal Zone from San Diego on January 5, and is due to anchor off the Pacific entrance of the Canal on January 17. The battleships, destroyers, and principal train vessels are to go on the southern cruise, the others basing at Balboa during the time until the assembly of both fleets there for the week of February 18 to 25. It is estimated that there are between 20,000 and 25,000 men in the two fleets.

Canal Traffic in December.

The Canal traffic for December, 1920, for commercial vessels, is shown as classified in the following tabulation:

PACIFIC TO ATLANTIC.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From West Coast of South America to East Coast of United States:							*Long tons.*
United States	19	52,432	61,250	80,923	53,479	$64,910.80	87,086
British	5	14,676	20,733	24,640	14,967	18,345.00	20,913
Norwegian	2	4,078	5,853	6,563	4,071	5,097.50	9,696
Totals	26	71,186	87,836	112,126	72,517	88,353.30	117,695
From West Coast of South America to Cristobal:							
British	10	5,760	9,331	12,658	6,670	7,210.00	7,847
Peruvian	3	4,010	8,315	12,666	6,614	5,012.50	4,235
Chilean	2	3,608	6,250	7,612	4,560	4,510.00	478
German	1	2,909	4,427	4,608	2,968	3,636.25	5,315
United States	1	336	350	615	372	420.00	492
Totals	17	16,623	28,673	38,159	21,184	20,788.75	18,367
From West Coast of South America to Europe:							
British	9	40,233	49,816	64,275	39,424	50,123.15	53,277
French	2	7,238	8,316	11,561	7,370	9,047.50	12,958
Belgian	1	3,151	4,043	5,072	3,094	3,938.75	7,000
Swedish	1	3,123	4,013	4,952	3,973	3,903.75	5,700
Danish	1	2,393	2,381	3,079	1,905	2,857.20	4,350
Dutch	1	2,224	3,807	3,623	2,229	2,780.00	5,316
Spanish	1	2,160	2,581	3,459	2,160	2,700.00	4,010
Totals	16	60,522	74,957	96,021	60,155	75,350.35	92,611
From West Coast of United States to Europe:							
United States	11	48,476	56,264	70,568	46,893	58,615.54	69,689
British	4	14,385	18,689	22,457	13,819	17,931.25	28,266
Totals	15	62,861	74,953	93,025	60,712	76,596.79	97,955
United States coastwise:							
United States	10	34,238	43,332	52,567	33,770	41,373.15	35,213
From Australasia to Europe:							
British	6	37,143	43,260	53,520	35,790	46,150.10	32,308
From West Coast of South America to Mexico:							
United States	3	13,626	17,356	21,347	13,362	12,496.32	.....
Norwegian	2	8,885	10,160	14,009	8,860	7,315.20	.....
British	1	4,325	4,963	6,533	4,178	3,573.36	.....
Totals	6	26,836	32,479	41,889	26,400	23,384.88	.....

PACIFIC TO ATLANTIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From West Coast of United States to Mexico:							*Long tons.*
United States	3	12,935	16,091	20,616	12,752	$11,585.52	.....
British	1	4,107	4,639	6,426	4,047	3,376.08	.....
Danish	1	2,472	2,460	2,858	1,692	2,952.00	4,564
Totals	5	19,514	23,240	29,970	18,491	17,913.60	4,564
From West Coast of Central America to Cristobal:							
British	3	2,886	3,111	5,003	2,935	3,597.20	943
Costa Rica	1	144	152	158	93	180 00	356
Totals	4	3,030	3,263	5,161	3,028	3,777.20	1,299
From West Coast of South America to Azore Islands.[1]							
Japanese	1	3,859	4,440	6,079	3,850	4,823.75	8,024
Dutch	1	2,746	4,393	4,368	2,726	3,432.50	6,700
Spanish	1	1,858	2,121	3,071	1,845	2,322.50	4,621
Totals	3	8,463	10,954	13,518	8,421	10,578.75	19,345
From Australasia to East Coast of United States:							
British	2	13,416	14,915	19,397	13,428	16,770.00	10,720
From Far East to East Coast of United States:							
Japanese	2	8,586	9,413	12,542	8,542	10,531.85	11,280
From Balboa to East Coast of Mexico:							
United States	2	8,126	8,799	12,042	7,247	6,422.34	.....
From West Coast of Canada to Europe:							
United States	1	3,450	5,448	5,687	3,450	4,312.50	7,407
From West Coast of South America to West Indies:							
German	1	2,963	4,490	4,637	2,893	3,703.75	5,374
From Far East to Cuba:							
Chinese	1	1,678	1,733	2,631	1,673	2,079.60	800
From West Coast of United States to Cristobal:							
United States	1	1,654	2,163	2,643	1,654	2,067.50	37
From Balboa to East Coast of United States:							
United States	1	1,514	1,574	2,733	1,667	1,135.50	.....
From West Coast of United States to Cuba:							
United States	1	1,400	1,504	1,994	1,400	1,750.00	2,213
Grand totals	120	383,203	472,986	600,262	382,422	453,039.91	457,088

[1] For orders.

ATLANTIC TO PACIFIC.

From East Coast of United States to West Coast of South America:							
United States	14	40,155	48,865	62,664	40,266	$49,798.10	58,620
British	11	33,970	41,500	55,834	34,014	42,462.50	43,068
Norwegian	4	9,746	11,926	15,317	9,513	12,182.50	21,140
Spanish	4	8,495	10,460	13,305	8,394	10,618.75	17,440
Japanese	3	10,748	12,102	15,699	10,372	13,240.95	19,676
Danish	2	4,604	5,271	6,423	3,983	5,674.00	9,029
Chilean	2	4,417	5,082	8,224	4,396	5,410.50	2,300
Totals	40	112,135	135,206	177,466	110,938	139,387.30	171,273
From East Coast of United States to Far East:							
United States	6	24,600	33,562	37,988	24,146	30,750.00	52,053
Japanese	6	24,362	28,043	37,620	23,950	30,366.25	34,635
British	5	17,472	23,267	26,736	16,852	21,840.00	34,199
Totals	17	66,434	84,873	102,344	64,948	82,956.25	120,887
From Cristobal to West Coast of South America:							
British	9	6,332	10,057	12,922	7,323	7,915.00	4,441
Peruvian	4	5,493	9,844	14,532	7,783	6,847.30	4,606
Chilean	3	5,071	8,827	10,165	6,160	6,338.75	998
United States	1	336	350	615	372	420.00	111
Totals	17	17,232	29,078	38,234	21,638	21,521.05	10,156
United States coastwise:							
United States	12	38,399	46,773	58,456	37,524	47,849.80	53,802

ATLANTIC TO PACIFIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From Europe to West Coast of South America:							*Long tons.*
British	5	21,517	27,482	34,377	21,427	$26,896.25	15,960
Dutch	2	5,268	6,780	6,898	4,280	6,585.00	6,200
Italian	1	3,339	4,266	5,860	3,486	4,173.75	720
Norwegian	1	2,883	3,649	4,589	2,896	3,603.75	6,075
Spanish	1	1,910	2,214	3,021	2,022	1,594.08	.....
Totals	10	34,917	44,391	54,745	34,111	42,852.83	28,955
From Europe to West Coast of United States:							
British	4	14,982	16,872	21,647	14,423	13,589.63	950
United States	1	4,820	6,026	7,583	4,819	6,025.00	1,410
Danish	1	4,244	5,318	6,636	4,236	5,305.00	3,476
Norwegian	1	3,053	3.886	4,894	3,054	3,816.25	6,822
Dutch	1	3,013	3,856	4,751	2,964	3,766.25	.....
Totals	8	30,112	35,958	45,511	29,496	32,502.13	12,658
From Mexico to West Coast of South America:							
United States	4	18,920	20,822	26,415	18,156	22,983.85	34,163
Norwegian	2	8,871	10,194	13,948	8,840	11,088.75	18,800
British	2	6,569	7,779	10,372	6,393	8,211.25	12,920
Totals	8	34,360	38,795	50,735	33,389	42,288.85	65,883
From Europe to Australasia:							
British	6	34,798	43,491	49,331	31,367	43,021.20	29,226
From East Coast of United States to Australasia:							
British	3	16,639	21,410	25,853	16,342	20,798.75	23,996
United States	2	8,401	10,139	12,077	7,471	10,561.25	14,145
Swedish	1	4,122	5,226	6,593	4,117	5,152.50	9,255
Totals	6	29,162	36,775	44,523	29,730	36,452.50	47,391
From Cristobal to West Coast of Central America:							
British	3	2,886	3,111	5,003	2,935	3,586.40	2,297
Costa Rica	1	144	152	158	93	180.00	18
Totals	4	3,030	3,263	5,161	3,028	3,766.40	2,315
From East Coast of United States to Philippines:							
United States	2	8,106	9,306	11,907	8,086	9,932.00	15,358
Japanese	1	4,357	5,415	6,995	4,275	5,446.25	7,156
Totals	3	12,463	14,721	18,902	12,361	15,378.25	22,414
From East Coast of Mexico to Balboa:							
United States	2	8,126	8,799	12,042	7,247	10,012.40	15,000
From East Coast of United States to Balboa:							
United States	2	5,583	6,643	8,560	5,319	6,978.75	9,372
From Cristobal to West Coast of United States:							
United States	2	2,986	3,756	4,796	2,963	3,732.50	2,864
From East Coast of United States to West Coast of Central America:							
United States	2	2,013	2,231	3,132	1,947	2,489.75	4,014
From East Coast of Mexico to West Coast of United States:							
United States	1	5,547	5,476	6,835	5,255	6,571.20	8,000
From Europe to West Coast of Canada:							
United States	1	4,504	4,899	5,972	4,502	5,630.00	1,582
From East Coast of United States to West Coast of Canada:							
British	1	4,083	5,196	6,502	4,044	5,103.75	5,329
From East Coast of Canada to Australasia:							
British	1	2,682	3,902	4,185	2,675	3,552.50	7,583
From East Coast of Central America to Balboa:							
British	1	(1)	(1)	(1)	(1)	2,164.50	(1)
From Colombian coastwise ports:							
British	1	638	706	1,170	654	797.50	747
Grand totals	145	449,204	554,932	698,602	441,336	554,809.41	619,451

[1] British cruiser of 5,329 tons displacement.

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Passage of the First of the New Shipping Board Passenger Vessels, in Pacific Mail Service.

The steamship *Creole State*, the first of the United States Shipping Board's new passenger vessels of the "State" class to come to the Canal, arrived at Cristobal on January 2, en route from Baltimore to San Francisco, via Los Angeles, in the service of the Pacific Mail Steamship Company. She cleared from Balboa at noon on January 4, having taken on additional passengers and cargo at the Canal ports.

The *Creole State* and the *Wolverine State*, which will come out in several months, are to be employed in the Indian Service of the Pacific Mail, running from San Francisco to Honolulu, Manila, Straits Settlements, and British India, and return, replacing the *Colusa* and the *Santa Cruz*, which will then probably be placed in the United States coastwise passenger service, plying between Baltimore and San Francisco.

The *Creole State* is of approximately 6,000 net and 11,000 gross tons and 502 feet long, a smaller ship than the "535's," of which the Pacific Mail is to have 5 for its trans-Pacific service. The general arrangement and finish are, however, very much the same. The passenger and saloon spaces are finished in ivory walls, with woodwork stained in mahogany finish, and throughout the finish is handsome without being ornate. The vessel has accommodations for 95 first-class passengers. The cargo capacity is about 13,000 tons of 40 cubic feet, including 1,200 tons of refrigerated space; in addition to which, on return voyages, about 1,000 tons of coconut oil can be carried in the fuel tanks.

The rated speed of the ship is 14½ knots, and her schedule in the Indian service provides for making Manila in 22 days from San Francisco, Singapore in 28 days, and Calcutta in 39 days. The return voyage from Calcutta to San Francisco, over a shorter course, is to be made in 34 days.

While at Cristobal the *Creole State* was equipped with a collapsible canvas swimming tank, 10 by 15 and 7 feet, which had been made at Cristobal shops on cable order.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Two Weeks Ending January 8, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	*Tons.*
[1]Borgland	Peter Olsen & Co.	December 25	December 26	32	.....
Laura C. Hall	Pacific Metals Co.	December 26	December 26	.....	32
Balboa	Colombian Maritime Co.	December 28	December 28	.....	38
Point Adams	Pacific Mail Steamship Co.	December 29	December 29	286	.....
Neches	United States Government	December 26	.....	7,543	.....
Salvador	Pacific Steam Navigation Co.	December 31	.....	2	.....
Ucayali	Peruvian Line	December 30	December 30	.....	68
Cauca	Pacific Steam Navigation Co.	December 30	December 30	.....	1
Jamaica	Pacific Steam Navigation Co.	January 2	January 2	.....	1
La Habra	Union Oil Co.	January 2	January 5	9,900	.....
Seiyo Maru	Toyo Kisen Kaisha	January 5	January 7	692	.....
West Boro	Sutton & Christensen	January 7	January 9	7,150	.....
Ansaldo San Giorgio II	Societa Nazionale di Navigazion	January 7	January 8	6	.....
San Jose	Pacific Mail Steamship Co.	January 7	January 8	14	.....
Manavi	Pacific Steam Navigation Co.	January 8	January 8	1	.....

[1] Omitted from last report.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, January 8, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Pacific[1]	1	12.48	2	6.10	2	14.05	2	19.40	Swedish	Johnson Steamship Line	362.0	51.3	16.0	Christiania	Valparaiso	General	1,735	5,360	4,089
Atagosan Maru	1	18.15	2	6.12	2	15.41	2	16.40	Japanese	Ryota Kisen Kaisha	356.0	49.8	29.5	New York	Yokkaichi	Cotton and steel	5,344	4,176	3,048
S-7[2]	31	9.48	2	6.15	2	13.14			American	United States Navy	231.0	30.0	4.0	Habana	San Diego				
Hawarden	1	19.18	2	6.20	2	15.38	2	20.50	American	Williams, Dimond & Co. (S. B.)	402.5	53.0	15.8	London	San Francisco	General	449	6,525	4,746
Erle	1	15.05	2	6.36	2	17.36	2	23.00	Norwegian	Arentz & Rederi	400.0	53.0	27.0	Philadelphia	Valparaiso	Coal	7,217	6,207	4,501
Typhoon	2	6.34	2	8.42	2	17.40	2	20.50	British	St. Mary's Steamship Co	331.0	47.0	20.6	Norfolk	Valparaiso	Coal	3,566?	3,489	2,634
Jamaica	26	13.50	2	10.15	2	18.37	2	19.40	British	Pacific Steam Navigation Co	220.0	34.0	13.3	Cristobal	Champerico	General	700	1,187	622
La Habra	2	10.20	2	10.40	2	18.38			Norwegian	W. Wilhelmsen	425.0	57.0	26.6	Tampico	Balboa	Fuel oil	9,900	7,053	5,085
Potosi	24	6.15	3	6.13	3	15.16	6	0.05	British	Pacific Steam Navigation Co	381.0	49.0	17.0	Glasgow	Coronel	Ballast		5,567	4,296
Genesee[3]	1	21.45	3	6.20	3	15.18	6	16.25	American	Captain Crowley	119.0	27.0	14.0	New York	Papeete			213	172
Creole State	3	6.45	3	12.06	3	6.54	4	13.20	American	Pacific Mail S. S. Co. (S.B.)	502.1	62.2	23.0	Baltimore	San Francisco	General and steel	304	12,023	8,443
Ortega	2	17.05	3	13.44	3	20.01	3	21.03	British	Pacific Steam Navigation Co	465.0	56.0	23.6	Liverpool	Coronel	General	2,388	8,345	4,998
Garfield	3	19.00	4	6.38	4	13.38	4	14.38	American	W. R. Grace & Co	299.4	45.0	21.7	New York	Callao	General	2,617	3,228	2,010
Willaston	4	2.55	4	9.10	4	17.19	4	18.15	British	John Edgar & Co	400.5	52.0	26.0	Norfolk	Lyttleton	Coal	7,415	5,701	4,126
Santa Luisa	4	17.31	5	6.10	5	14.50	5	15.35	American	W. R. Grace & Co	350.2	51.6	23.4	New York	Valparaiso	General	3,456	5,694	3,975
Jupiter	4	7.50	5	6.25	5	14.58	5	15.50	Spanish	Cia Anonima Maritime Union	339.2	52.1	14.0	Cardiff	Iquique	Ballast		5,223	3,994
Chile	26	17.25	5	9.50	5	17.15	5	18.45	British	Pacific Steam Navigation Co	350.0	43.0	18.6	Cristobal	Valparaiso	General	567	4,065	2,668
No. 285[4]			5	9.20	5	14.57			American	United States Navy				Cristobal	Pedro Miguel				
Dewey	5	15.55	6	6.35	6	15.52	6	17.10	American	Williams, Dimond & Co. (S. B.)	410.0	54.0	24.0	Galveston	San Francisco	Sulphur	7,000	6,633	4,910
Huallaga	5	12.40	6	6.50	6	14.50	6	16.12	Peruvian	Peruvian Line	360.0	44.7	22.1	Walsend	Callao	General	2,139	4,514	2,386
Artigas	6	6.40	6	7.12	6	16.41	7	14.35	American	North Atl. & Western Co. (S. B.)	390.0	54.2	18.6	Boston	Portland	General	1,976	6,161	4,427
Treverbyn	6	10.42	6	11.17	6	19.25	7	14.50	British	Hain Steamship Co	400.7	52.3	25.0	Sabine	Melbourne	Sulphur	6,200	5,835	4,181
Edward Luckenbach	6	11.52	6	13.10	6	20.16	6	21.18	American	Luckenbach Line	436.0	57.0	29.0	New York	San Francisco	General, steel	7,671	8,543	6,427
Cape Romain	6	12.45	6	13.20	6	21.20	8	13.18	American	Atlantic Gulf and Pacific Corp.	376.4	52.3	24.8	Philadelphia	San Francisco	General	6,300	5,142	3,568
Invader[5]			6	10.00	6	12.58			American	Joe Bryan				Cristobal	Gatun Lake	Ballast		2	2
Lock City			6		6				American	W. C. Hyler				Gatun Lake	Balboa			9	7
Donald McKay	6	13.48	7	6.25	7	14.23			American	W. S. & A. Line	491.0	54.0	23.0	New York	Townsville	General	6,000	6,528	4,730
Agwimars	6	15.27	7	6.26	7	15.20	7	16.20	American	Ward Line	429.0	59.0	28.5	Port Arthur	Shanghai	Kerosene	9,819	7,851	5,552
Queen Elizabeth	7	6.58	7	7.23	7	15.59	7	17.00	British	E. Edwards & Sons	360.0	48.0	25.0	Baltimore	Valparaiso	Coal	5,645		
Westboro	7	7.00	7	7.40	7	16.45			American	United States Shipping Board	409.5	54.2	24.6	Norfolk	Balboa	Coal	7,127		
Point Lobos	5	21.34	7	9.10	7	17.21	8	0.22	American	Pacific Mail Steamship Co	239.0	44.0	18.0	Baltimore	San Francisco	General	2,164	2,895	1,967
Magdala	7	13.03	7	13.35	7	20.58	7	22.08	Danish	Orient Steamship Co	360.0	52.0	25.0	Baltimore	Valparaiso	Coal	6,297	4,715	3,334
El Condado	7	17.50	8	6.27	8	14.52	8	15.54	Spanish	General Navigation Co	330.0	49.0	20.6	Norfolk	Callao	Coal	4,773	3,730	2,637
Coalinga	8	8.50	8	9.35	8	18.27	8	19.15	American	Union Oil Co	471.0	55.0	29.6	Tampico	San Pedro	Crude oil	10,000		
Quillota	6	10.48	8	11.30	8	19.21	8	20.27	British	Pacific Steam Navigation Co	361.4	46.2	19.2	New York	Guayaquil	General	1,515	4,768	2,956

[1] Motor ship. [2] Submarine. [3] Yacht. [4] Subchaser. [5] Launch.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Gen. O. H. Ernst	1	15.15	2	6.39	2	14.08	3	17.05	American	Panama Railroad Steamship Line	356.0	45.3	23.6	Antofagasta	Boston	Nitrates	4,200	4,503	2,764
Maple Branch	1	17.15	2	6.48	2	14.19	2	22.00	British	Nautilus Steam Shipping Co	400.0	52.0	23.6	Valparaiso	Liverpool	General	7,056	5,618	4,116
Roma	1	19.30	2	8.10	2	16.02	2	17.10	British	Rowland & Marwoods S. S. Co.	342.0	49.5	22.5	Mejillones	Vallencia	Nitrates	5,750	4,087	2,955
Port Victor	1	21.00	2	8.17	2	16.10	2	18.20	British	Commonwealth and Dom. Line	469.3	58.2	24.0	Timaru	London	Frozen meat, etc.	6,226	9,336	5,582
Talabot	2	7.30	2	10.10	2	18.52	2	20.29	Norwegian	N. S. Bjonness & Son	410.0	56.0	30.0	Caleta Buena	Cristobal [7]	Nitrates	10,231	8,279	6,328
Caddo	1	5.00	2	11.31	2	19.50	2	21.30	American	Standard Oil Co. of N. J.	415.0	55.2	18.0	Caleta Buena	Tampico	Ballast		6,438	4,391
Melville Dollar	2	16.43	3	6.28	3	14.25	3	22.15	Canadian	Dollar Steamship Line	370.0	50.0	22.0	Singapore	New York	Lumber, general	5,667	5,153	3,938
Arakan	2	16.10	3	6.34	3	15.33	3	17.00	Dutch	Rotterdam Lloyd Line	400.0	53.5	24.6	Portland	Brake, Ger	Wheat	7,216	6,193	4,406
Mount Berwyn	2	18.00	3	7.45	3	17.07	3	17.07	British	Sefton Steamship Co	400.3	52.3	24.0	Vancouver	Gibraltar	Wheat	6,700	5,793	4,008
Hattie Luckenbach	2	22.00	3	7.50	3	16.42	3	16.42	American	Luckenbach Steamship Line	331.5	47.0	27.0	Everett	New York	Lumber, general	4,803	4,708	3,768
Cape Henry	2	23.05	3	8.05	3	17.43	5	9.44	American	Atl. Gulf-Pacific Steamship Co.	376.4	52.3	23.1	San Francisco	Baltimore	Lumber, general	5,311	5,146	3,557
Point Judith	1	23.00	3	13.33	3	20.30	4	20.37	American	Pacific Mail Steamship Co	289.0	44.1	19.0	San Francisco	Baltimore	General	3,000	2,895	1,982
Orcus	3	18.00	4	6.53	4	14.50	4	15.05	American	Wessel Duval & Co. (S. B.)	380.2	52.1	23.8	Iquique	Charleston	Nitrate of soda	6,834	5,667	4,220
Chipchung	4	6.00	4	9.04	4	17.10	5	6.40	American	Green Star Line (S. B.)	402.6	53.0	20.0	Shanghai	Baltimore	General	5,700	6,566	4,884
Bakersfield	4	0.25	4	14.22	4	22.25	4	22.45	American	Williams, Dimond & Co. (S. B.)	410.5	54.3	24.8	Seattle	Liverpool	[8]	[16]5,765	6,593	4,924
Windber	4	21.15	5	8.11	5	16.00	5	18.45	American	Pacific American Fisheries	200.0	40.1	21.0	Tacoma	New York	Lumber, copper	3,500	3,036	2,126
Curaça	5	1.00	5	8.16	5	16.40	5	21.55	British	New York & Pacific S. S. Co.	403.0	52.3	29.0	Iquique	Hamburg	Nitrates	7,723	6,804	4,897
Santa Ana	5	4.30	5	8.28	5	16.25	5	17.08	American	W. R. Grace & Co	360.2	51.6	24.3	Valparaiso	New York	[9]	3,987	5,842	4,150
West Apaum	4	21.45	5	9.26	5	17.26	5	23.15	American	Atl. Gulf & Pacific Co. (S. B.)	109.6	54.2	24.0	Portland	Philadelphia	[10]	[12]	6,402	4,556
Elkhorn	5	1.09	5	10.02	5	20.58	6	1.25	American	Struthers & Dixon (S. B.)	102.6	54.8	24.0	Vancouver	Birkenhead	Ties	5,143		
Santa Tecla	5	5.30	5	10.08	5	18.58	5	19.22	American	W. R. Grace & Co	289.6	40.0	22.9	Eten	New York	[11]	2,125	2,835	1,827
Maricopa	5	11.00	5	12.48	5	21.41	6	2.20	Norwegian	W. Wilhelmsen	423.4	57.0	21.0	Tocopilla	Tampico	Ballast		6,996	5,108
Quabbin	4	19.07	5	15.10	5	22.40	6	6.00	American	McCormack & McPherson (S.B.	425.8	57.0	18.6	San Francisco	New York	Ballast			
La Habra	2	18.36	5	15.34	5	23.55	5	23.55	Norwegian	W. Wilhelmsen	424.8	57.0	20.0	Balboa	Tampico	Ballast		7,053	5,085
Oluf Maersk	5	22.00	6	8.06	6	17.53	7	19.55	Danish	A. P. Moller	281.3	40.2	18.1	Tocopilla	Philadelphia	Nitrates	3,100	2,213	1,527
Alkmaar	5	12.05	6	8.14	6	16.50	6	18.00	Dutch	Royal Netherlands S. S. Co	460.0	62.6	28.6	Valparaiso	Rotterdam	Nitrates, general	10,009	9,505	6,807
Quilpue	6	5.50	6	8.53	6	17.45	8	1.03	British	Pacific Steam Navigation Co	361.0	46.2	16.1	Guayaquil	New York	General	410	4,742	3,023
Haxtum	6	8.48	6	10.07	6	18.10	7	10.55	American	Struthers & Dixon (S. B.)	402.5	53.0	26.2	Portland	Naples	Wheat	7,793	6,525	4,748
S. C. T. Dodd	6	9.30	6	11.47	6	21.25	6	21.25	American	Standard Oil Co	425.8	57.0	27.9	San Francisco	Philadelphia	Lubricating oil	8,500		
No. 285[4]			6		6	12.50			American	United States Navy	110.0	16.0		Pedro Miguel	Cristobal				
Lime Branch	6	11.55	6	13.11	6	23.00	7	2.20	British	Nautilus Steam Shipping Co	396.0	56.2	23.6	Punta Arenas	Liverpool	[12]	7,447½	6,579	5,072
R-24[2]	8	18.15	7	6.47	7	13.30			American	United States Navy				Balboa	Cristobal				
Albionstar	12-8	22.00	7	7.27	7	15.50	7	20.35	British	Blue Funnel Line	150.0	58.5	25.0	Auckland	Falmouth	Frozen meat, etc.	4,804	8,317	5,531
Berwickshire	6	21.30	7	8.09	7	17.05	7	20.00	British	Scottish Shire Line	450.1	57.1	24.0	Port Pirie	London	General	9,000		
Cambrian [6]	5	6.00	7	8.30	7	17.00	7	20.18	British	British Admiralty	446.6	41.6	17.0	Corinto	Colon [7]				
San Jose	7	15.45	8	6.30	8	13.45			American	Pacific Mail Steamship Co	283.0	37.0	15.4	San Francisco	Cristobal	General	350	2,352	1,602
Bologna	7	15.30	8	7.20	8	15.05			Italian	La Veloce Line	384.9	46.7	19.0	Valparaiso	Genoa	General	796	5,192	3,593
Suffolk	8	1.00	8	8.01	8	16.35	8	21.40	British	Federal Steam Navigation Co	460.0	58.2	23.0	Sydney	London	Frozen, general	6,000	8,975	6,457
City of Victoria	8	3.00	8	8.48	8	17.20	9	7.20	Canadian	Canadian-Western S. S. Co	411.5	54.1	23.8	Vancouver	Birkenhead	Railroad ties	7,400		
Santa Rosa	8	7.00	8	9.44	8	17.20	9	22.25	American	W. R. Grace & Co	404.6	53.9	26.6	Punta Arenas	Falmouth	Nitrates	7,500	6,741	4,804
Lake Elkwater	7	20.00	8	12.20	8	20.22	8	22.20	American	American Metal Transp. (S.B.)	253.4	43.6	23.0	Valparaiso	New York	[13]	3,006	2,940	1,976
Manavi	8	11.40	8	12.50	8	20.25			British	Pacific Steam Navigation Co	216.0	35.1	11.0	Guayaquil	Cristobal	[14]	222	1,357	884
Ausaldo San Giorgio II	7	14.00	8	13.20	8	21.52	8	23.30	Italian	Socie. Nazionale di Nav	391.7	51.6	23.6	Valparaiso	Genoa	[15]	6,205		

[6] British light cruiser. [7] For orders. [8] Flour, barley, rice, lumber, and wheat. [9] Nitrate, copper, glue, lentils, peas, beans, etc. [10] Lumber, railroad ties, and canned goods. [11] Vanadium and cocoa beans. [12] Chilean and Peruvian produce. [13] Nitrates, copper, and general. [14] Ecuadorian produce. [15] Nitrate, beans, and sugar. [16] Long tons. [17] 3,808,744 feet B. M., 550 tons.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

(Continued on page 320, column 2.)

Commercial Radio Communication.

NAVY DEPARTMENT, UNITED STATES NAVAL COMMUNICATION SERVICE,
OFFICE OF DISTRICT COMMUNICATION SUPERINTENDENT,
FIFTEENTH NAVAL DISTRICT,
BALBOA, C. Z., January 8, 1921.

CIRCULAR 1 PB–21.

The Naval Communication Service through an arrangement with the Auditor of The Panama Canal, is now prepared to receive at Colon radio station at any hour of the day or night, commercial messages destined to ships in the Pacific Ocean and at Balboa radio station, commercial messages to ships in the Atlantic Ocean. These messages will carry the regular land wire charge of 2 cents per word for the first 10 words and 1 cent a word, thereafter, in addition to the radio station and the ship charges, with a minimum charge of 20 cents.

Balboa radio station is now handling the Central American traffic with Bocas and Limon radio stations, which was previously taken care of by Colon radio station. For the present no additional land wire charge will be made for messages filed in Colon and delivery of messages destined for Colon and Cristobal will be effected by the Colon radio station.

D. F. PATTERSON,
Lieutenant-Commander, U. S. N.,
District Communication Superintendent.
Fifteenth Naval District.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the two weeks ended January 8:

Launch *Captain Wilhelm*, hull repairs and installation of new engine, steamship *Marne*, general repairs and rebuilding, dredge *No. 84*, general repairs; tug *Bohio*, general repairs and rebuilding; launches *Limon*, general repairs and overhauling; *Santa Rita*, rebuilding; barges *Nos. 134* and *135*, general repairs; submarine *R–24*, periodical overhaul; schooner *Astoria*, small miscellaneous repairs to engine and crankshaft; mine yawl *No. 101*, hull repairs and overhauling of engine; U. S. S. *Frederick*, overhauling of refrigerating machine; steamships *Ardmore*, heavy engineer's department repairs; *Eastern Mariner*, miscellaneous repairs, engineer's department; tug *Genesee*, miscellaneous minor repairs; steamship *Mina Brea*, miscellaneous heavy repairs; motor schooner *Laura C. Hall*, light repairs to exhaust manifold; steamships *Eastern Temple*, repairs to suction line holds and bilge boards; *Lake Filbert*, manufacture piston rings; U. S. S. *Neches*, miscellaneous boiler repairs; tug *Mariner*, docking, staging, cleaning, and painting, and miscellaneous repairs; launch *Captain Wilhelm*, hull repairs and installation of new engine; U. S. S. *Tacoma*, miscellaneous repairs; steamship *Bahia Castillo*, repairs to main engine and starboard tail shaft; submarine *S–7*, periodical overhaul; subchaser *No. 284*, docking and miscellaneous repairs; yacht *Genesee*, fastening plates for hatch; steamships *Caddo*, repairs to oil heaters; *Quabbin*, welding anchor windlass clutch bracket.

The following vessels were at the Cristobal shops for repairs during the two weeks ended January 10:

Steamships *General G. W. Goethals*, *General O. H. Ernst*, *Allianca*, *Cristobal*, *Panama*, *Ulysses*, and barge *Mamei*, miscellaneous repairs and painting to engine, deck, and steward departments; steamships *Bahia Castillo*, overhaul circulating pump; adjust H. P. and L. P. crank brasses, etc.; *Gold Star*, general overhaul and alterations; U. S. S. *Favorite*, repair steering gear; dredge *No. 86*, repair cutter engine, main engine, pumps, spud well, etc.; tugs *Ajax*, test crank, thrust, and tail shafts, repair boiler, capstan, piping, etc; tug *St. Enedor*, repair stanchions and beading; install lines on main engine, etc.; steamships *Ulua*, *Point Bonita*, *Metapan*, *Creole State*, *Caribbean*, *Huasco*, schooner *Jessie Nell*, tug *Porto Bello*, minor repairs; steamships *Achilles* and barge *Darien*, miscellaneous repairs and painting to engine, deck, and steward departments; steamship *Salvador*, repair reversing engine, boilers, hatches, hatches, etc.; tug supply *No. 1*, repair sanitary pump; launch *Activo*, overhaul engine; steamships *Reaper*, repair dynamo, winch, condenser, etc.; *Sussex*, furnish labor and material in connection with salvage; *Crijnssen*, turn up commutator, repair piping, tank, etc.; U. S. A. T. *Buford*, weld furnace, make coupling bolts, shuttle valves, fire tools, etc.; steamship *Ecremont Castle*, repair blower engine and copper

pipe; steamship *Toloa*, U. S. S. *Favorite*, steamship *Quilpue*, launch *Hibiscus*, steamship *Parismina*, wrecking barge *No. 91*, launch *No. 11*, steamship *City of Victoria*, U. S. A. junior mine planter, *First Lieut. H. G. Douglas*, steamships *Ebro*, and *San Jose*, minor repairs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Two Weeks Ending January 8, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Pastores	United Fruit Co	December 26	December 26	29	1
Laura C. Hall	Pacific Metals Corporation		December 26		13
Caribbean	Panama Railroad Cattle Inudstry		December 26		1
Macoris	French Line		December 26		230
Acajutla	Pacific Steam Navigation Co		December 27		587
Alexandrian	Leyland Line		December 27		46
Peru	Pacific Steam Navigation Co		December 28		1,072
Chile	Pacific Steam Navigation Co	December 26		602	
Jamaica	Pacific Steam Navigation Co	December 26		30	
Essequibo	Pacific Steam Navigation Co	December 27	December 28	22	(2)
Point Adams	Pacific Mail Steamship Co		December 29		1,288
Uhua	United Fruit Co	December 28	December 29	749	28
Point Bonita	Pacific Mail Steamship Co	December 28	December 29	191	(2)
Gen. G. W. Goethals	Panama Railroad Steamship Line	December 28		2,571	
Heredia	United Fruit Co	December 28	December 29	379	115
Huasco	Chilean Line	December 28	December 30	419	272
Metapan	United Fruit Co	December 29	December 29	1	1½
Caldas	Caribbean Steamship Co	December 29	December 30	150	(2)
Ucayali	Peruvian Line		December 30		1,425
Cauca	Pacific Steam Navigation Co		December 30		204
Ulv	Five-Continent Steamship Co	December 29	December 30	355	(2)
Alliance	Panama Railroad Steamship Line	December 30		16	
Caribbean	Panama Railroad Cattle Industry	December 30		210	
Panama	Panama Railroad Steamship Line	December 31		3,201	
Ulysses	Panama Railroad Steamship Line	December 31		12,008¾	
Mamei	Panama Railroad Steamship Line	December 31		7,525	
Cristobal	Panama Railroad Steamship Line	December 31		9,387½	
Salvador	Pacific Steam Navigation Co	January 1		99	
Pacific	Johnson Line	January 1		43	
Ulua	United Fruit Co	January 2	January 2	39	1
Jamaica	Pacific Steam Navigation Co		January 2		680
Caribbean	Panama Railroad Cattle Industry		January 2		½
Ortega	Pacific Steam Navigation Co	January 2	January 3	281	(2)
Point Judith	Pacific Mail Steamship Co	January 3	January 4	682	46
Chile	Pacific Steam Navigation Co		January 5		589
Toloa	United Fruit Co	January 3	January 5	549	½
Parismina	United Fruit Co	January 3	January 6	1,216	82
Carrillo	United Fruit Co	January 5	January 6	28	364
Panama	Panama Railroad Steamship Line		January 7		1,368
Point Lobos	Pacific Mail Steamship Line	January 5	January 7	12	964
Reaper	Texas Oil Co	January 5	January 7	9,000	(2)
Quilota	Pacific Steam Navigation Co	January 6	January 8	264	757
Quilpue	Pacific Steam Navigation Co	January 6	January 8	70	1,003
Caribbean	Panama Railroad Cattle Industry	January 6		202	
Crijnssen	Royal Dutch West India Mail	January 7		14	
San Jose	Pacific Mail Steamship Co	January 8		403	
Achilles	Panama Railroad Steamship Line	January 8		12,025½	
[1]Darien	Panama Railroad Steamship Line	January 8		7,455½	
Agadir	Pacific Steam Navigation Co	January 8		150	
Bologna	Italian Line	January 8		31	
Manavi	Pacific Steam Navigation Co	January 8		222	

[1] Barge. [2] No cargo laded.

Quarantine Regulations for Aircraft.

THE PANAMA CANAL, BALBOA HEIGHTS, C. Z., January 3, 1921.

CIRCULAR No. 626-8:

By virtue of the authority contained in Executive Order of March 31, 1920, published as Panama Canal Circular No. 601-110, the following is added as paragraph 91 of General Quarantine Instructions, published as Panama Canal Circular No. 626-6:

"91. The term vessels as used in these instructions shall be held to include aircraft."

JAY J. MORROW,
Acting Governor.

The "Bahia Castillo" Carrying Englishwomen to Settle in Australia.

The British steamship *Bahia Castillo* arrived at Cristobal on December 28 from London, via Bermuda and Kingston, bound for Sydney and Melbourne with 59 first-class, 170 second-class, and 288 third-class passengers, of whom the greater part are young Englishwomen who are the wives or fiancées of Colonial soldiers and are going out to Australia to make their homes. There are 306 women, 85 children under 16 years of age, and 126 men among the passengers. The *Bahia Castillo* served as a troopship during the World War. She is an ex-German vessel, of 9,949 gross tons, 491 feet 6 inches in length by 59 feet 3 inches beam.

After clearing the Canal the *Bahia Castillo* developed trouble with the packing ring in the stern tube around the starboard propeller shaft, with considerable leakage into the shaft alley, and returned to Balboa, where she went into dry dock on January 3. New rings were made at Balboa shops, the springs which hold them in place were renewed, and the vessel sailed again in the morning of January 9. During their stay many of the passengers were entertained in the homes of Canal employees.

Out to "The Boy."

In connection with the stay of the *Bahia Castillo*, a Canal employee has contributed the following impression to THE PANAMA CANAL RECORD:

In your dry official way you will state in THE PANAMA CANAL RECORD that the Australian troopship, the *Bahia Castillo*, passed through the Canal on December 31, en route from London to the antipodes with a passenger complement of 520 people. That will be your utterly prosaic statement of this event—the habitual manner of speaking of similar happenings. But you need to sit on the hatch of the vessel somewhere down there where you will be surrounded by the 2d class and the 3d class passengers; need to show yourself as possibly a bit more human than is your ordinary manner before you can know much about this particular trip of the *Bahia Castillo*. This is better exemplified if you have a wee bit "cuttie" growling in your pipe, a tendency to permit the kiddies to sprawl over and round you without molestation—a slight burr-ish accent will help, and you'll be a human magnet among them if you can manage to refer casually to the "bloomin' hather." For it's that way with them—they're largely kin to one Bobbie Burns.

A first impression of them is a somewhat pathetic one; but it rubs off readily. You feel more and more pathetic as you go down and down from the main deck to where they really are. Arrived there, and properly ingratiated, it is forgotten. It doesn't matter so much that they're closely quartered, uncomfortable a good bit; and that they're sort of "by-and-large" crowd, some of the kempt with the unkempt, so to speak. A crowd of your own making couldn't be different—you wouldn't really want it to be.

It is far from carnal to let your eye guide you as among them. It's just human. You could tell those lassies who are going out on the great adventure to the antipodes as though they were resplendently labeled; tell them down on the lower decks of the *Bahia Castillo* just as well as though in de-luxe surroundings. In fact, they'll tell you themselves. I sort of like that; I think you would. It's better for the world that way. That's why, in a momentous way, that this trip of the *Bahia Castillo* can not be stated officially; it's a "bridal special," en route from maidenhood in England, Scotland, and thereabouts, to glimmering, glittering, resplendent, rosy-hued matrimony in the celestial antipodes. Too many words. Not a bit. You would say it just that way yourself, sitting there on the lower hatches among them and letting the spirit of it soak into you. I digress to say, not as an alienist but as a human, that something's wrong with matrimony unless there's just about this degree of enthusiasm attached to it.

Incidentally, they are going out to Australia and New Zealand; primarily, they are en route by the quickest possible passage to "the boy." I don't know why in every case he's "the boy;" but if he's that to them, it's all right with me; if you refer to him as "fiancé," that's all right, too. As an interviewer, one would not succeed among them in attaining any idea or description of "the boy." In letting them interview you, one comes to know that he is Scotch, English, Australian, New Zealander, Canadian,

American (in remote cases), as may be; you're compelled to believe that he's a prince of a chap, that in most cases he came over to fight the Hun and succeeded in having shot at least one arrow without fiendish intent. All wars have this saving incident. And the war note is made more dominant in this case by the fact that Wilhelm, once of Imperial notoriety, furnished the *Bahia Castillo* to the British Commonwealth; not willingly, nor for a bridal ship.

No Scotch lassie, nor English lassie gushes; not even over "the boy." I like that, too. Right away you arrive when they tell you about him; not without a good degree of enthusiasm jumbled up with some fine pride, to be sure; but wholesomely. I found him to be all manner of men. It was hard to imagine that one among them, yclept affectionately as "Tommy," would find a farmer lad and a marriage license awaiting her at Tasmania. But even so. It seemed good to me that he wasn't an "agriculturist," nor a "rancher," just a farmer; and, bless you, it was all right with her, quite all right. Others equipped with marriage licenses would be "cl-a-rks," railroad men, all kinds of them. It is best for the world that way.

Few bridal specials are sidetracked, fewer dry-docked; and no roseate hue is reflected from the side walls of Balboa dry dock, not if you are strictly analytical as to surroundings. Likewise if you are 5 weeks out from home with 5 weeks more to go before you get to "the boy," quite reasonably you become aggrieved; by synchronous stages you arrive at peevishness of the disagreeable sort, when your "Special" is delayed. This may have existed with them; but it was not in evidence. Closely, and in many instances rather disagreeably, quartered and surrounded, they were taking the inevitable with a fine and saving grace. You caught that, if nothing else, from them. They clung with their fine native intensity to the main objective. Brides, either de-facto or prospective, assume, too, certain rights, as I have known them; the essential one being that they are entitled to the best; not 2d or 3d class facilities in traveling, to be sure. They reflected a different, even a better concept of it, these lassies from the bairns and dells and downs. It was best exemplified when they sang one of their own home songs, "I've a Wee Bit Hoosie Waitin'." Passage money is the same as any other money, they had no hesitancy in admitting it; and "the boy" was to have some little thrill of pride when he discovered that she had willingly chosen cheaper passage than he had provided, wasn't he? Homes, and nations, and worlds are not better founded than on these lines.

Reluctantly I turn from the brides to note the "others present." Chiefly there were families in process of reassembling. Wives and children returning to their homes, the kiddies bearing up well under the strain of a long and tiresome voyage; husbands, Army officers, civilians, and interspersed here and there an entire family voyaging out to a new world. An homogeneous assemblage of 520 crusaders, such as no nation other than Britain furnishes. Many similar voyages pass us here. By a turn of fate the *Bahia Castillo* becomes distinctive, and accentuates something of a world service not ordinarily acredited to The Panama Canal, difficult in the analyzing, intangible in accomplishments; but the human influence measured, in units not connected with traffic reckoning. Our's is not, to be sure, the only route, but it is worth while that we get them home somewhat quicker and maybe a bit cheaper; worth while, too, that now and then they tarry a bit with us, and reciprocally the clans have the opportunity of commingling.

The wisdom of the world frets and fumes in an attempt to adjudicate the differences of mankind; instinct, without wisdom, concludes that the best antidote is the enhanced intimacy of the peoples.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies, including the 25 per cent surcharge, effective January 1, 1921:

Commodities.	Unit.	Price.
Brass, bar	Lb.	$0.44
Brass, sheet	Lb.	.75
Bronze, Tobin	Lb.	.375
Cement, at Panama:		
Including bag and surcharge	Bag	2.11
Credit for empty bag returned	Bag	.25
Cement, at Colon:		
Including bag and surcharge	Bag	1.95
Credit for empty bag returned	Bag	.25
Charcoal	Cwt.	1.63
Copper, bar	Lb.	.44
Gasoline, motor grade, in drums	Gal.	.56
Lead, sheet	Lb.	.17
Lead, pig	Lb.	.125
Lumber, yellow pine or fir, except ceiling	M ft. B. M.	93.75
Lumber, ceiling, siding, and flooring, 1" x 6"	M ft B. M.	118.75
Lumber, flooring, 1" x 3" and 1" x 4"	M ft. B. M.	143.75

Lumber, native, prices per 1,000 feet board measure:

Kind.	Rough.		Dressed.	
	Green.	Kilned.	Green.	Kilned.
Almendra	$106.25	$118.75	$115.00	$127.50
Alcavu	87.50	100.00	96.25	108.75
Alcareto	106.25	118.75	115.00	127.50
Amargo	106.25	118.75	115.00	127.50
Bateo	62.50	75.00	71.25	83.75
Cedro Amargo	106.25	118.75	115.00	127.50
Caoba Blanca	87.50	100.00	96.25	108.75
Guayacan	137.50	150.00	146.25	158.75
Maria	62.50	75.00	71.25	83.75
Pilon	75.00	87.50	83.75	96.25
Roble	62.50	75.00	71.25	83.75
Mangle Colorado	106.25	118.75	115.00	127.50
Nispero	137.50	150.00	146.25	158.75

Notes:

1. Second grade Alcavu $68.75
2. Second grade Caoba Blanca 68.75
3. Second grade Cedro Amargo 93.75
4. Almendra, special 75.00
5. Alcareto, special 75.00
6. Amargo, special 75.00
7. The charge for dressing and kiln-drying the same for second grade as first grade.
8. The charge for dressing 2 sides or 4 sides lumber the same.

Commodities.	Unit.	Price.
Metal, yellow	Lb.	$0.375
Nuts, iron, machine, hexagon	Lb.	.69
Nuts, iron, machine, square	Lb.	.225
Nails, common wire	Lb.	.13
Nails, galvanized	Lb.	.15
Oakum, navy, spun	Lb.	.20
Oakum, navy, unspun	Lb.	.175
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl of 42 gals.	3.50
Oil, fuel, at Balboa and Cristobal, in drums or barrels, no surcharge	Bbl of 42 gals.	3.75
Oils, greases, and lubricants:		
Oil, air, compressor cylinder	Gal.	.575
Oil, ammonia cylinder	Gal.	.685
Oil, burning	Gal.	1.56
Oil, cylinder, dark, marine	Gal.	1.125
Oil, cylinder, dark, marine	Gal.	1.25
Oil, ice, machine, steam	Gal.	1.00
Oil, engine, dynamo	Gal.	.79
Oil, engine, in tins	Gal.	.69
Oil, engine, in barrels	Gal.	.65
Oil, gas, engine, heavy, in barrels	Gal.	1.05
Oil, gas, engine, in cases, heavy	Gal.	1.175
Oil, gas, engine, in drums, medium	Gal.	.66
Oil, kerosene, in drums	Gal.	.375
Oil, kerosene, in tins (cases)	Gal.	.45
Oil, linseed, boiled	Gal.	2.50
Oil, linseed, raw	Gal.	2.19
Oil, locomotive engine	Gal.	.59
Oil, lard	Gal.	2.125
Oil, marine engine	Gal.	1.06
Oil, marine engine	Gal.	.625
Oil marine engine	Gal.	.44
Oil, marine engine	Gal.	.75
Oil, marine engine	Gal.	1.02
Oil, mineral seal	Gal.	.375
Oil, nonliquid	Lb.	.09
Oil, stationary engine	Gal.	.49
Oil, sperm	Gal.	2.875
Oil, gas engine motor, heavy	Gal.	.94
Oil, signal	Gal.	1.40
Oil, valve	Gal.	.975
Oil, car	Gal.	.34
Grease, black gear	Lb.	.115
Grease, yellow cup, No. 3	Lb.	.14
Grease, yellow cup, No. 5	Lb.	.17
Grease, rod, special	Lb.	.25
Grease, tunnel bearing	Lb.	.215
Tallow	Lb.	.225
Turpentine	Gal.	2.40
Turpentine, substitute	Gal.	.69
Vaseline	Lb.	.18
Paint, lead, white, dry	Lb.	.175
Paint, lead, white, in oil	Lb.	.175
Paint, white, zinc, dry	Lb.	.225
Paint, white, zinc, in oil	Lb.	.21
Paint, zinc, 35 per cent in oil	Lb.	.19
Rivets	Lb.	.19
Rope, Manila, ¾" diameter	C. ft.	.69

Commodities.	Unit.	Price.
Rope, Manila, ⅜" diameter	C. ft.	$1.50
Rope, Manila, ½" diameter	C. ft.	2.50
Rope, Manila, ⅝" diameter	C. ft.	4 185
Rope, Manila, ¾" diameter	C ft.	5.075
Rope, Manila, ⅞" diameter	C. ft.	7.00
Rope, Manila, 1" diameter	C. ft.	8.75
Rope, Manila, 1¼" diameter	C ft.	12.90
Rope, Manila 1½" diameter	C. ft.	19.69
Rope, Manila, 1¾" diameter	C. ft.	26.81
Rope, Manila, 2" diameter	C. ft.	31.44
Rope, Manila, 2½" diameter	C. ft.	51.50
Rope, Manila, 3" diameter	C. ft	76.25
Rope, Manila, 3½" diameter	C. ft.	91.25
Rope, Manila, 4" diameter	C. ft.	124.125
Soap, laundry	Lb.	.175
Soda, ash	Lb.	.05
Steel, bar	Lb.	.09
Steel, spring	Lb.	.21
Steel, cold, rolled, round	Lb.	.20
Steel, sheet	Lb.	.06
Steel structural (angles, beams. etc.)	Lb,	.06
Tin, block	Lb.	.69
Tin, banca	Lb.	.625
Tin, sheet	Lb.	.225
Washers, cut	Lb.	.15
Waste, colored	Lb.	.21
Waste, white	Lb.	.21
Zinc, boiler plate, ⅜" x 6" x 12"	Lb.	.17

Importation of Automobiles of American Manufacture into the United States.

The Chief of the Division of Civil Affairs authorizes the following:

American employees of The Panama Canal going to the United States, occasionally take with them uncrated motor vehicles of American manufacture for their personal use while in the United States, which they have imported into the Canal Zone from the United States or purchased through agents in the Canal Zone or the Republic of Panama. Two cases have been reported recently in which employees were required to make deposits or produce bonds for the purpose of guaranteeing that the vehicles would again be exported from the United States.

In order that employees of The Panama Canal might be advised of the regulations covering the return of motor vehicles of American manufacture to the United States, the matter was taken up with the Division of Customs of the United States Treasury Department, and the following statements are quoted from a letter dated December 27, 1920, from the Chief of that Division:

> While articles of American manufacture exported from and returned to the United States are entitled to free entry under the provisions of paragraph 404 of the Tariff Act of October 3, 1913, such products must be returned without having been advanced in value or improved in condition while abroad and must be capable of being identi ed as American goods.
>
> The general practice in force at New York, which the Treasury Department approves, is as follows: In case an automobile is brought in on the same vessel with the owner and is clearly entitled to free entry as of domestic manufacture, it is passed free of duty as part of the owner's baggage. When a motor vehicle arrives separately as freight, an entry is required, in which case it is necessary to produce the evidence required under the Department's regulations. An invoice of returned American goods and declaration of foreign exporter is necessary to cover such a shipment, and it is also necessary for the consignee to have record evidence of the exportation of the vehicle from the United States. In case the record evidence of exportation can not be furnished, collectors of customs have authority under the provivisions of Article 334, United States Customs Regulations of 1915, to waive the production of such record evidence upon the importer's affidavit. This may be done provided the Appraiser reports the automobile to be of American manufacture, not improved in condition while abroad. Ordinary repairs which simply restore a motor vehicle to its condition when exported from the United States, are not considered an advance in value.

A copy of the regulations governing the return of domestic products to the United States, which goes into the matter at greater length, was also received with the above-mentioned letter. These regulations may be referred to by calling at room 305, Administration Building, Balboa Heights. Statement is also made in the above-referred-to letter that the Collector of Customs at New Orleans, La., has been furnished with a copy of the letter in question for his information and guidance.

The Chief of the Division of Customs also stated that it is probable that in the cases where importers have been required to make deposits or produce bonds, the automobiles had been advanced in value or their proof of American origin could not be furnished.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights (telephone 286):

Apprentice plate printer (male and female); $1.54 per diem; form 304; age, 16 years but not 18 years; vacancies exist in the Bureau of Engraving and Printing, Washington, D. C., February 9, 1921.

Assistant examiner, Patent Office (male and female); $1,500 a year; form 1312; age, 20 but not 70 years; vacancies exist in the Patent Office, Washington, D. C.; February 9, 10, 11, 1921.

Dental interne (male and female); $1,200 a year; form 1312; age, 20 but not 70 years; vacancies exist in St. Elizabeth's Hospital, Washington, D. C.; February 9, 1921.

Educational director, $1,800 to $2,400 a year; teachers, $1,600 to $2,400 a year (male and female); form 2118; announcement No. 570-amended; age, within reasonable age limits; vacancies exist under the Federal Board for Vocational Education, Public Health Service; May 3, 1921.[1]

Electrical instrument maker (male and female); $1,500 a year; form 1800; age, 20 but not 50 years; vacancies exist in the Signal Service at Large, Washington, D. C.; Camp Alfred Vail, N. J.; February 8, 1921.[1]

Expert appraiser, estate tax division (male and female); $3,000 to $4,000 a year; form 2118; announcement No. 49; age, 30 but not 55 years; vacancies exist in the Bureau of Internal Revenue, Treasury Department; February 8, 1921.[1]

Fuel engineer, $2,500 to $4,200 a year; assistant fuel engineer, $1,800 to $2,500 a year; junior fuel engineer, $1,620 to $1,800 a year (male and female); form 2118; announcement No. 46; age, within reasonable age limits; vacancies exist in the Bureau of Mines, Department of Interior, Pittsburgh, Pa.; February 1, 1921.[1]

Hydrographic and topographic draftsman (male and female); $1,600 to $2,000 a year; form 1312; announcement No. 375-amended; age, within reasonable age limits; vacancies exist in the field service of the Coast and Geodetic Survey.[2]

Junior drainage engineer, $1,200 to $1,920 a year (male and female); form 1312; announcement No. 463; age, under 30 years; vacancies exist in the Bureau of Public Roads, Department of Agriculture; February 9, 1921.

Laboratory assistant, senior grade, $1,320 to $1,500 a year; intermediate grade, $1,200 to $1,320 a year; junior grade, $1,080 to $1,200 a year (male and female); form 1312; announcement No. 41; age, 18 but not 40 years; vacancies exist in the Bureau of Mines, Department of the Interior, Pittsburgh, Pa.; April 5, 1921.[1]

Lockmaker (male and female); $3.75 per diem; form 1800; announcement No. 30; age, 20 but not 50 years; vacancies exist in the Equipment Shops of the Post Office Department; February 1, 1921.[1]

Multigraph operator (male and female); $1,000 to $1,200 a year; form 304; age, 18 but not 55 years; vacancies exist in the Departmental Service, Washington, D. C.; February 9, 1921; April 13, 1921.

Senior instructor, $1,800 to $3,600 a year; instructress, $1,500 to $3,000 a year (male and female); form 1312; age, within reasonable age limits; announcement No. 389-amended; vacancies exist in the War Department; February 1, 1921.[1]

Tabulator and computer, $1,200 to $1,800 a year (male and female); form 1312; age, 18 but not 70 years; vacancies exist in the Bureau of Crop Estimates, Department of Agriculture; February 9, 1921.

Associate engineer, $2,000 to $2,800 a year; assistant engineer, $1,400 to $1,800 a year (male and female); form 1312; announcement No. 372-amended; age, below 50 years; vacancies exist in the Bureau of Standards, Department of Commerce.[2]

Ethnologist, $1,800 a year (male and female); form 2118; age, 25 but not 50 years; vacancies exist in the Smithsonian Institution; February 21, 1921.[1]

Plant propagator, $1,800 a year (male and female); age, 25 but not 55 years; vacancies exist in the Bureau of Plant Industry, Department of Agriculture; February 23, 1921.

Technical instructor (chief machinist); $2,000 to $2,200 a year (male and female); form 1312; announcement No. 44; age, 21 but not 50 years; vacancies exist in the Ordnance Department at Large, February 8, 1921.[1]

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[1]Nonassembled. Date given for nonassembled examination is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

[2]Nonassembled. Applications will be received at any time until further notice.

Deceased and Insane Employees.

The estates of the following deceased or insane employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

DECEASED.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Joseph Cumberbatch..	25806	Barbados.....	Colon.....	Panama Railroad Co...	Dec. 12, 1920.
Daniel Davis.....	48148	Antigua.....	Colon.....	Panama Railroad Co...	Dec. 11, 1920.
Joseph Lawrence.....	24105	Jamaica.....	Camp Bierd.....	Panama Railroad Co...	Dec. 11, 1920.
Marcelino Alberto....	30146	St. Lucia.....	Panama.....	The Panama Canal.....	Nov. 28, 1920.
Thomas Fredericks, *alias* T. Frederik....	31251	Bermuda.....	Colon.....	Electrical Division.....	Dec. 29, 1920.
Thomas Mullins, *alias* J. Mullen.....	44028	Barbados.....	Panama.....	Dredging Division....	Dec. 24, 1920.
Joseph Rymple.....	35105	Barbados.....	Colon.....	Mechanical Division...	Dec. 30, 1920.
Joseph Wint.....	24729	Barbados.....	Cristobal.....	Marine Division.....	Dec. 23, 1920.

INSANE.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of commitment.
James Brown.....	22452	Jamaica.....	Panama.....	The Panama Canal..	Dec. 4, 1920.

Official Circulars.

Property Returns Under Supervision of Property Bureau.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 28, 1920.

To all concerned—Effective January 1, 1921, the property returns for all accountable officials who do not have offices in the Administration Building, and who have gold property clerks, will be prepared in their offices under the supervision of the Property Bureau.

The Property Bureau will assist and direct field property clerks and others in the custody of property in the proper methods of accounting and caring for the property in their charge, will check their work to see that property records are correct and handled in accordance with regulations, will assist in taking inventories of property as required, and will as near as possible establish uniform methods of accounting for property in the field for all divisions.

JAY J. MORROW,
Acting Governor.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., December 30, 1920.

CIRCULAR NO. 275:

Effective January 3, 1921, Mr. G. V. Barril is designated an accountable official of The Panama Canal, *vice* Mr. F. E. Holleran, and as such will account for all nonexpendable property in use by the Division of Fortifications.

ELWYN GREENE,
Acting Auditor, The Panama Canal.

Approved:
JAY J. MORROW,
Acting Governor.

Accountable Officials.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., December 30, 1920.

CIRCULAR NO. 276:

Effective January 1, 1921, the following are designated accountable officials of The Panama Canal and as such will account for all nonexpendable property in use by the divisions listed after their names:

EXECUTIVE DEPARTMENT.

Mr. A. R. Lang, Division of Schools.
Mr. Guy Johannes, Police and Fire Division.
Mr. C. H. Calhoun, Division of Civil Affairs.

PANAMA RAILROAD COMPANY.

Mr. M. C. Connolly, Roadmaster.
Mr. R. B. Walker, R. & F. Agent.
Mr. T. W. McFarlane, Coaling Plants.

HEALTH DEPARTMENT.

Col. L. T. Hess, Ancon Hospital.
Maj. T. J. Leary, Colon Hospital.
Dr. Louis Wender, Corozal Hospital.

SUPPLY DEPARTMENT.

Mr. J. McEwen, Hotel Tivoli.
Mr. Andrew Johnston, Hotel Washington.
Mr. Carl Strom, Hotel Aspinwall.

Mr. C. A. McIlvaine, Mr. S. W. Heald, Col. H. C. Fisher, and Mr. R. R. Watson will be relieved of accountability for that part of their property in use by the divisions listed above upon effecting a transfer to the parties designated, but will continue to be accountable for the remainder of the property in use by their respective departments.

ELWYN GREENE,
Acting Auditor, The Panama Canal.

Approved:
JAY J. MORROW,
Acting Governor.

Motor Transportation Rates.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 3, 1921.

To all concerned—Effective February 1, 1921, the following motor transportation rates will be charged against Departments and Divisions of The Panama Canal. This supersedes previous circulars:

	New rate.	Old rate.
Jitneys.....	$1.00	$1.00
Ford ½-ton delivery.....	.80	.75
Ford and form A 1-ton trucks.....	1.10	.80
Ford 1-ton garbage trucks.....	1.25	1.00
1½-ton trucks and Cadillac touring.	2.20	2.20
2- and 2½-ton trucks.....	2.40	2.40
3½-ton trucks.....	3.00	3.00

A reduction of 33 cents an hour may be made for each Ford truck used without a chauffeur, and $1.01 an hour for other trucks.

R. E. MORRIS,
Chief Quartermaster.

Approved:
JAY J. MORROW,
Acting Governor.

Honorable Discharges from Military or Naval Service.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., January 3, 1921.

To all concerned—In order that a record may be made on the personnel files in this office, all employees, excepting those who have recently done so, are requested to forward to this office as soon as possible, their honorable discharges from active military or naval service of the United States.

C. A. MCILVAINE,
Executive Secretary.

Sailing of the "Colon."

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., January 6, 1921.

To all concerned—The steamship *Colon* will sail from Cristobal for New York via Port au Prince, Haiti, on Monday, January 17, at 3 o'clock p. m.

S. W. HEALD,
Superintendent.

Sale of Steel Blocks and Wooden Booms.

Bids will be received in the office of the Chief Quartermaster, of The Panama Canal, for all or part of 61 steel blocks and 11 wooden booms, 39 feet long, located at the Cristobal storehouse, on the basis of the first satisfactory offer being received. Descriptions can be obtained upon application.

Sale of Cement Sweepings.

PANAMA RAILROAD COMPANY,
OFFICE OF THE SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., January 8, 1921.

To all concerned—The Panama Railroad Company has on hand 249 sacks of cement ex the steamship *Panama*, December 31, 1920, which is known as sweepings, or loose cement picked up after the discharge of a steamer. There is very little foreign substance to be found in it, and for almost any concrete work it is just as good as any cement.

We will be glad to have you bid on this lot of cement before 3 o'clock p. m., Friday, January 14, 1921. Please make your bids on basis of keeping the bags, and also on basis of returning the bags to us.

A charge of 25 cents per bag will be collected when cement is delivered, but this charge will be refunded when bags are returned in usable condition.

S. W. HEALD,
Superintendent.

Building Division Organization.

THE PANAMA CANAL,
DEPT. OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., January 8, 1921.

To all concerned—Effective January 15, 1921, all Building Division operations north of Darien will be placed in charge of Mr. John Christianson, General Foreman.

Operations south of Darien will continue in charge of Mr. E. L. Galliher, General Foreman.

J. B. FIELDS,
Acting Resident Engineer.

Meeting, Board of Local Inspectors.

The Board of Local Inspectors will hold its next meeting on Monday, January 17, at 9 a. m., in room 237, Administration Building, Balboa Heights.

Sale of Wooden Barge.

Bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., for the purchase of "Moran dump barge *No. 145*," beached at Farfan, on basis of purchasing the barge "as is, where is." First satisfactory offer received will be considered.

Sale of Four Boilers.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., February 7, 1921, and then opened, for the purchase of four boilers removed from the steamship *Cristobal*, located near Dock No. 13, Balboa. Form of proposal may be had upon application to the office of the Chief Quartermaster. The Panama Canal reserves the right to reject or accept any or all bids.

Sale of "Stonetex" Paint.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, up to 10.30 a. m., January 31, and then opened, for the purchase of approximately 774 gallons of dark brick red "Stonetex" paint in 5-gallon containers located at Section A, Balboa storehouse. Form of proposal may be had upon application to the office of the Chief Quartermaster. The Panama Canal reserves the right to reject any or all bids.

Sale of Second-hand Roofing Iron and Tar Paper.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., January 15, 1921, for the purchase of about 1,600 pieces of used corrugated roofing iron and about 30 rolls of tar paper at Cristobal. Form of proposal may be had upon application. The Panama Canal reserves the right to reject any or all bids.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 311.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
January 2	Ulua	United Fruit Co.	Port Limon.
January 2	Parismina	United Fruit Co.	New Orleans.
January 3	Conway	Royal Mail Steam Packet Co.	Kingston.
January 3	Tolosa	United Fruit Co.	New York via Habana.
January 3	Abangarez	United Fruit Co.	New Orleans via wayports.
January 5	Carrillo	United Fruit Co.	New York via Kingston.
January 5	Reaper	Texas Oil Co.	Puerto Lobos.
January 5	Caribbean	Panama Railroad Cattle Industry.	Cartagena.
January 6	Crijnssen	Royal Netherlands West India Mail.	Amsterdam via wayports.
January 7	Buford	United States Army	New York.
January 8	Bayano	Elders & Fyffes	Port Limon.
January 8	Achilles[18]	Panama Railroad Steamship Line.	Norfolk.
	[18] And barge *Darien*.	[19] Transport.	PORT OF BALBOA.
January 2	Bahia Castillo[21]	British Government	High seas.
January 5	Seiyo Maru	Toyo Kisen Kaisha	Hongkong.

[21] Returned for repairs.

*DEPARTURES.

Date.	Vessel.	Line.	For—
January 2	Caribbean	Panama Railroad Cattle Industry.	Cartagena.
January 2	Ulua	United Fruit Co.	New York via Habana.
January 4	Cristobal	Panama Railroad Steamship Line.	Norfolk.
January 4	Patria	Cuban Government	Cuba.
January 3	Somme[19]	United States Army	New York via San Juan.
January 5	Conway	Royal Mail Steam Packet Co.	Cartagena.
January 5	Ulysses[20]	Panama Railroad Steamship Line.	Norfolk.
January 5	Tolosa	United Fruit Co.	Port Limon.
January 5	Abangarez	United Fruit Co.	New Orleans.
January 6	Carrillo	United Fruit Co.	New York via Colombia and Kingston.
January 6	Parismina	United Fruit Co.	New Orleans via Boca del Toro and Habana.
January 7	Panama	Panama Railroad Steamship Line.	New York via Haiti.
January 8	Bayano	Elders & Fyffes	Kingston.
	[20] And barge *Mamei*.		
January 7	Seiyo Maru	Toyo Kisen Kaisha	Valparaiso.

*Other than ships passing through the Canal.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Volume XIV. Balboa Heights, C. Z., January 19, 1921. No. 23.

Arrival of United States Fleets.

Following the arrival of 12 of the 14 seaplanes of the air force of the Pacific Fleet on January 15, the main body of the Pacific Fleet arrived at the Pacific entrance on January 17. The battleships *Mississippi* and *New Mexico* and the hospital ship *Mercy* came into the inner harbor; the other vessels anchored in the bay, to the eastward of Naos Island and to seaward of the anchorage of the seaplanes, and the *Mississippi* later returned to the anchorage. Including the seaplanes there are approximately 50 warships in the group.

The vanguard of the Atlantic Fleet, consisting of the tender *Black Hawk* and the destroyers *Wm. B. Preston*, *Barney*, *Blakeley*, *Crowninshield*, *Preble*, and *Bernadou*, comprising Division 19, and destroyers *Satterlee*, *Dahlgren*, *Goldsborough*, *Semmes*, *Graham*, and *Mason*, comprising Division 25, arrived at Cristobal in the morning of January 19 and started immediately to transit the Canal. The remainder of the Atlantic Fleet is expected in the afternoon or night of January 19.

The Atlantic Fleet is to pass through the Canal without delay, and the main forces of both fleets are due to clear from Balboa for Peruvian and Chilean waters in the forenoon of January 22.

Two Record-size Ships in Balboa Dry Dock in One Week.

The battleship *New Mexico*, flagship of the Pacific Fleet, was placed in dry dock at Balboa in the morning of January 19 for about two days' work, principally in cleaning, scraping, and painting the hull.

The *New Mexico* is the largest ship to have been dry-docked at the Canal. She is 624 feet in length over all (600 feet between perpendiculars), 97 feet 4½ inches in beam, and has a displacement of 32,000 tons. Her length is less than that of the *Von Steuben* (637 feet 3 inches between perpendiculars), which was in the dry dock in January, 1918, but the *New Mexico* exceeds the *Von Steuben* in beam and displacement.

Prior to the docking of the *New Mexico* the largest ship to have been placed in the dry dock at Balboa was the Chilean dreadnaught *Almirante Latorre*, which went in on January 14, 1921, and is only slightly smaller than the *New Mexico*.

The handling of two such record ships in a week is an event in the history of the dry dock. The dock is 1,000 feet in length by 110 feet in width at the entrance and has a depth of 45 feet of water over the keel blocks at ordinary high tide. Like the chambers of the Canal locks, it is capable of handling any ship which has been built to date.

Arrival of Seaplanes Flying from San Diego.

Twelve of 14 United States Navy seaplanes which started from San Diego for the Canal between 8.20 and 8.50 a. m. of December 30 reached the Pacific entrance at about 4 o'clock in the afternoon of

January 15. The course they followed was about 3,200 nautical miles, covered in 17 days, with 8 intermediate stops. The stops were made at Bartolome Bay, Magdalena Bay, Banderas Bay, Acapulco, Salina Cruz, Gulf of Fonseca, Gulf of Nicoya, and Bahia Honda, Panama.

Two N. C. planes fell out. One was wrecked by a storm, and was sunk by the tender *Mugford's* guns to prevent its becoming a danger to navigation. The other came down on account of engine trouble and has since been recovered.

The performance of the machines is considered highly satisfactory, and something of an event in naval aviation. It is understood that prior to the departure of the force from San Diego bets were offered at heavy odds that the force would not reach Panama with enough planes to form one complete division (6 planes).

The force was made up of 2 divisions of 6 *F-5-L's* and one division of 2 *N. C.'s*. The performance of the *F-5-L's* was 100 per cent.

Visit of the Chilean Squadron.

The dreadnaught *Almirante Latorre* and destroyers *Riveros*, *Uribe*, and *Williams*, British-built vessels acquired by the Chilean Navy, passed through the Canal on January 12 and are now in the harbor at Balboa.

The *Latorre* was in dry dock at Balboa for 48 hours, beginning in the afternoon of January 14. The hull was cleaned and painted below the water line, the fairwaters and rope guards for the 4 propellers were repaired, the rudder and sternpost were reriveted, and various other minor repairs were made.

While the battleship was in the dock she was visited and admired by hundreds of residents of the Pacific end of the Canal Zone and of the city of Panama. She is the largest and most powerful warship belonging to Latin America—a vessel of 32,000 tons displacement, 624 feet in length by 92 feet beam, mounting ten 14-inch guns in 5 turrets. Her huge bulk, amply accommodated by the 1,000-foot dry dock, dwarfed a tug which happened to be in the dock, forward of the battleship, to the appearance of a launch. The ponderous framework of the forward mast, the bulky turrets and projecting guns, the squat funnels, the heavy belt of armor, the swell of the capacious hull discovered to the air, gave the beholder a picture of compressed power, of the marvels of modern engineering and construction.

At sunset the ship's guard, armed with rifles, was paraded for retreat. The band, in compliment to the United States, played the "Star Spangled Banner;" and in conclusion, as the flag at the stern fluttered down, played the national anthem of Chile. Below, along the hull, men scraped and painted, singing as they worked. Lights glowed in the gloom far down beneath the vessel; the rapid fire of hammers smote the ear; and the fluctuating glare of an oxy-acetylene torch, cutting and welding down near the keel, in the hands of masked men, added an eerie touch.

During their stay the men have enjoyed shore liberty. A pamphlet, describing the Canal in Spanish and especially prepared by The Panama Canal for the squadron, was furnished to all the members of the personnel.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended January 15:

Launch *Captain Wilhelm*, hull repairs and installation of new engine; steamship *Marne*, general repairs and rebuilding; dredge *No. 84*, general repairs; tug *Bohio*, general repairs and rebuilding; launches *Limon*, general repairs and overhauling; *Santa Rita*, rebuilding; barges *Nos. 132*, *134*, and *135*, general repairs; motor ship *Astoria*, small miscellaneous repairs to engine and crankshaft; mine yawls *Nos. 101* and *252*, hull repairs and overhauling of engines; U. S. S. *Frederick*, overhauling of refrigerating machine; steamship *Mina Brea*, miscellaneous heavy repairs; U. S. S. *Neches*, miscellaneous boiler repairs; tug *Mariner*, docking, staging, cleaning and painting, miscellaneous repairs; steamship *Bahia Castillo*, repairs to main engine and starboard tail shaft; submarine *S-7*, periodical overhaul; subchaser *No. 284*, docking and miscellaneous repairs; steamship *Sag Harbor*, repairs to boiler tubes; U. S. S. *Cleveland*, miscellaneous repairs; steamship *S. V. Harkness*, miscellaneous heavy repairs; U. S. S. *Trinity*, C. and R. repairs; steamships *Westboro*, repairs to blower engine; *Donald McKay*, boiler, fuel oil system, pumps and air ejector repairs; *Ansaldo San Giorgio II*, manufacturing 30 bolts; U. S. S. *Dolphin*, small miscellaneous repairs; steamship *Azeus*, repairs to main engine; V. de G. C. *Almirante Latorre*, miscellaneous heavy repairs and docking.

The following vessels were at the Cristobal shops for repairs during the week ended January 17:

Steamships *General Hodges*, *General Goethals*, *Colon*, and *Advance*, miscellaneous repairs and painting to engine, deck, and steward departments; *Arzila*, install sheathing on after bulkhead No. 2 hold, etc.; *Barima*, change from coal to oil burner; repair boiler, oil pumps, etc.; clean bilges; *Palena*, electric weld boiler; repair binnacle lamp; U. S. S. *C. 285*, straighten propeller, clean hull, renew copper, etc.; steamship *Sussex*, furnish labor and material in connection with salvage; launch *Active*, overhaul engine; U. S. *Favorite*, repair hull, towing machine, and brake band; renew water cooling system in bilge; launch *Capron*, repair hull, sheathing, engine, pump, etc.; steamship *Ardmore*, repair circulating engine; schooner *Anthony Nichols*, services of diver and sailmakers; steamship *Navarre*, tug *Tavernilla*, steamship *Acajutla*, tug *Porto Bello*, steamship *Caribbean*, launch *Azimuth*, steamships *Hector*, *Cauca*, *North American*, minor repairs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending January 15, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Crijnssen	Royal Dutch West India Mail		January 9		780
Caribbean	Panama Railroad Cattle Industry		January 9		(3)
Toloa	United Fruit Co	January 9	January 9	54	(4)
Ebro	Pacific Steam Navigation Co	January 9	January 10	36	(5)
Bologna	Italian Line		January 10		8
Salvador	Pacific Steam Navigation Co		January 10		355
Teviot	Pacific Steam Navigation Co	January 9		160	
Acajutla	Pacific Steam Navigation Co	January 10		293	
Arzila	Pacific Steam Navigation Co	January 10		74	
San Jose	Pacific Mail Steamship Co		January 11		1,115
Advance	Panama Railroad Steamship Line	January 11	January 13	90	242
Colon	Panama Railroad Steamship Line	January 11		3,052	
Cartago	United Fruit Co	January 11	January 13	831	6
Atenas	United Fruit Co	January 12	January 12	(1)	(6)
Laura C. Hall	Pacific Metals Corporation	January 12	January 12	(2)	(5)
La Nazarre	French Line	January 12	January 15	86	116
Caribbean	Panama Railroad Cattle Industry	January 13		300	
L. J. Drake	Standard Oil Co	January 13	January 15	10,000	(5)
Calamares	United Fruit Co	January 13	January 15	550	7
Palena	Chilean Line	January 14		354	
Hector	Royal Dutch West India Mail	January 15		180	
Collegian	Harrison Line	January 15		645	
San Mateo	United Fruit Co	January 15	January 15	42	(5)
Agadir	Pacific Steam Navigation Co		January 15		1,760
Manavi	Pacific Steam Navigation Co		January 15		238
Antillian	Leyland Line	January 15		801	

[1] 900 pounds. [2] 23 pounds. [3] 195 pounds. [4] 230 pounds. [5] No cargo laded. [6] 905 pounds.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, January 15, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Terrier	8	14.53	9	6.33	9	14.46	9	15.47	Norwegian	W. Wilhelmsen	400.0	52.0	24.6	Newport News	Mejillones	Coal	7,124	5 531	3,979
Texan	9	3.10	9	7.30	9	15.35	9	14.28	American	American-Hawaiian Co	471.0	57.2	19.8	New York	Portland	General	3,320	9,154	7,033
Port Hacking	9	8.59	9	13.31	9	21.18	9	22.35	British	Commonwealth and Dom. Line	440.0	55.0	28.6	New York	Sydney	General	6,288	7,885	5,847
West Notus	9	13.32	10	6.35	10	14.40	10	19.45	American	Swayne & Hoyt (S. B.)	410.5	54.3	19.0	Rio de Janeiro	San Francisco	Coffee, general	2,367	6,583	4,914
Nils	9	18.35	10	6.48	10	15.29	10	16.27	Norwegian	Mayer & Sandsalen Larvik	277.0	42.0	18.5	New Orleans	Talara	Iron pipes	2,350	2,117	1 404
Salvador	1	13.43	10	8.15	10	15.34	10	16.21	British	Pacific Steam Navigation Co	215.0	33.0	13.4	Cristobal	Champerico	General	385	1,213	692
Willfaro	10	7.30	10	8.58	10	16.48	11	8.22	American	Williams Steamship Co	381.0	52.0	24.0	New York	San Pedro	General, steel, etc	7,148	5 680	4,162
Wm. H. Webb	10	9.16	10	9.50	10	17.55	12	21.00	American	Barber Steamship Co. (S. B.)	417.0	54.0	24.0	Philadelphia	Hongkong	Case oil	7,500	6,528	4,735
Egremont Castle	[8]9	23.45	11	6.15	11	14.00	11	15.45	British	James Chambers & Co	410.0	52.0	27.2	New York	Yokohama	General	7,150	6,090	4,389
Trinity[1]	10	18.40	11	6.20	11	13.00	....	.....	American	United States Navy	477.0	60.0	27.0	Port Arthur	Balboa	Fuel oil	10,771	.....	.....
Stuartstar	11	9.36	11	10.45	11	19.10	11	23.40	British	Blue Star Line	420.0	54.0	22.3	Norfolk	Gisborne	.....	.....	.....	.....
San Jose	8	13.45	11	12.35	11	20.25	12	14.33	American	Pacific Mail Steamship Co	283.0	37.0	17.8	Cristobal	San Francisco	General	.....	2,352	1,602
Otarama	11	6.20	11	12.40	11	21.12	11	22.16	British	New Zealand Shipping Co	430.0	53.0	27.1	Hull	Auckland	General	10,000	7,981	5,518
Cecil County	11	14.45	12	6.25	12	15.43	....	.....	American	Calumbers Shipping Co. (S. B.)	431.0	59.2	24.8	Tampico	Balboa	Fuel oil	10,000	8,097	5,400
Vikingstar	11	18.14	12	6.45	12	14.45	12	19.02	British	Blue Star Line	400.4	52.3	20.4	Glasgow	Auckland	Ballast	.....	6,870	4,909
Admiral Latorre[2]	10	11.00	12	8.00	12	17.09	....	.....	Chilean	Chilean Government	625.0	92.0	34.0	Port of Spain	Valparaiso	.....	.....	.....	.....
Williams[3]	10	11.02	12	8.03	12	19.10	....	.....	Chilean	Chilean Government	328.0	35.0	14.0	Port of Spain	Valparaiso	.....	.....	.....	.....
Uribe[3]	10	11.06	12	8.03	12	19.18	....	.....	Chilean	Chilean Government	328.0	35.0	14.0	Port of Spain	Valparaiso	.....	.....	.....	.....
McCormick[3]	12-18	12.34	12	8.18	12	17.53	14	17.50	American	United States Navy	310.0	31.0	13.0	Santiago	San Diego	.....	.....	.....	.....
Riveros[3]	10	11.04	12	8.25	12	18.00	....	.....	Chilean	Chilean Government	328.0	35.0	14.0	Port of Spain	Valparaiso	.....	.....	.....	.....
Northumberland	13	7.57	13	8.25	13	16.52	13	17.55	British	Federal Steam Navigation Co	530.5	63.0	30.0	New York	Auckland	General	8,000	12,821	8,700
Laura C. Hall[4]	12	15.03	13	9.35	13	17.37	14	19.25	British	Pacific Metals Corp	81.0	25.0	9.6	Cristobal	Buenaventura	Ballast	.....	130	69
Rovuma	12	15.36	13	9.40	13	17.38	13	18.52	French	French Government	419.0	54.0	26.8	Philadelphia	Valparaiso	Coal	6,698	7,484	5,408
Buford[5]	7	21.15	13	10.06	13	19.14	13	20.14	American	United States Army	370.8	44.2	27.1	New York	Manila	Explosives	1,878	.....	.....
La Brea	13	9.48	13	10.12	13	18.48	13	19.37	American	Union Oil Co	435.0	56.0	29.6	Tampico	Los Angeles	Crude oil	10,000	7,405	5,158
Lula[6]	.....	.....	13	6.00	13	10.48	....	.....	American	Union Oil Co	.....	.....	.....	Cristobal	Gatun Lake	Ballast	.....	2	1
Natica	13	17.48	14	6.25	14	14.39	14	15.55	British	Anglo-Saxon Petroleum Co	406.2	51.3	26.3	Port Arthur	Shanghai	Kerosene	6,761½	5,967	4,321
Rainbow[7]	1	4.00	14	6.48	14	15.34	17	10.47	American	United States Navy	325.0	41.0	20.0	Habana	Honolulu	.....	.....	.....	.....
Lake Ellicott	14	6.40	14	7.20	14	15.35	14	20.30	American	N. Orleans & S. Amer. S. S. Co.	253.0	44.0	22.0	New Orleans	Valparaiso	General	2 323	2,920	1,973
Tregantle	14	1.52	14	12.22	14	19.47	14	20.12	British	E. Hain & Co	414.0	52.0	21.6	Hull	Valparaiso	General	5,077	6,035	4,610
Logan[5]	14	6.46	15	6.22	15	14.26	15	15.13	American	United States Army	445.5	49.2	25 6	New York	San Francisco	Explosives	2 400	.....	.....

[1] Tanker. [2] Battleship. [3] Destroyer. [4] Motor schooner. [5] Transport. [6] Launch. [7] Subtender.

Kayseeka	14	17.08	15	6.28	15	14.44	15	16.15	American	Thorndyke Trenholme	400.7	54.2	20.0	Antwerp	Seattle	Silver sand	4,447	6,529	4,712
Nankai Maru	14	16.38	15	6.44	15	15.25	15	16.15	Japanese	Muji Kaiun Kaisha	400.0	49.0	26.0	Newport News	Mejillones	Coal	6,381	6,010	4,590
S-3 and S-4[8]	12-31	9.48	15	7.13	15	15.45	17	11.10	American	United States Navy	231.0	30.0	14.0	Habana	San Diego				
S-6 and S-8[8]	12-31	9.48	15	7.20	15	16.14	17	11.10	American	United States Navy	231.0	30.0	14.0	Habana	San Diego				
Manavi	8	19.25	15	8.50	15	16.18	15	17.28	British	Pacific Steam Navigation Co.	216.0	35.0	11.1	Cristobal	Guayaquil	General		1,357	884
Agadir	8	8.06	15	11.26	15	18.07	15	21.07	British	Pacific Steam Navigation Co.	285.0	41.3	19.6	London	Paita	General		2,871	1,826

[8] Submarine.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Orca	8	16.00	9	7.22	9	14.58	9	20.50	British	Pacific Steam Navigation Co.	550.3	67.3	33.0	Astoria	Havre	Wheat	11,989	15,931	10,486
Ebro	9	6.45	9	8.15	9	15.55	10	7.20	British	Pacific Steam Navigation Co.	450.3	57.8	24.0	Valparaiso	New York	General	356	9,089	6,215
Cedar Branch	9	7.40	9	9.47	9	17.40	10	6.42	British	F. & W. Ritson	390.5	51.0	23.0	Coronel	Liverpool	General	5,276	4,912	3,642
Lompoc	9	9.20	9	10.09	9	17.29	9	18.15	British	C. T. Bowring	435.3	55.8	18.0	Antofagasta	Tampico	allast	.....	7,488	5,342
Roxburgh	9	14.20	10	6.37	10	15.10	10	15.37	British	E. Edwards & Son	345.4	50.0	24.6	Tocopilla	Rotterdam	Nitrates	6,582	4,880	3,511
William A. McKenney	9	21.00	10	8.12	10	17.00	10	18.15	American	Crowell & Thurlow	395.0	55.1	27.8	Tocopilla	Pensacola	Nitrates	9,025	6,532	4,528
Noerdijk	10	2.00	10	9.05	10	16.35	10	18.25	Dutch	Holland American Line	471.0	60.1	25.6	San Francisco	Rotterdam	Wheat, etc	9,965	9,165	6,961
Acajutla	10	2.00	10	9.23	10	17.00	....	.....	British	Pacific Steam Navigation Co.	215.7	33.5	13.4	Buenaventura	Cristobal	Coffee, etc	293	1,273	706
Arzila	11	7.40	11	8.45	11	16.07	....	.....	British	Royal Mail Steam Packet Co.	285.0	41.3	16.6	Champerico	Cristobal	General	74	2,856	1,797
Mexico	11	8.10	11	10.31	11	18.30	12	5.18	British	Pacific Steam Navigation Co.	400.9	52.3	22.6	Valpariaso	Liverpool	General	3,504	6,551	4,205
Advance	11	9.30	11	10.48	11	19.00	13	15.05	American	Panama Railroad Steamship Line	295.0	38.4	.....	Guayaquil	New York	General	434	2,947	2,113
Elanchove	11	11.50	11	12.58	11	21.10	12	11.05	Spanish	Cia. Maritime Elanchove	322.0	41.5	23.7	Mejillones	Barcelona	Nitrates	4.137	3.020	2,214
Kodrus	11	11.45	11	14.29	11	22.40	13	1.17	British	C. Doresa	370.0	51.0	21.0	Taltal	United King.	Nitrates	5,850	.....	3,543
Laura C. Hall	11	10.40	12	6.40	12	15.03	13	9.35	British	Pacific Metals Corp.	81.0	25.6	9.6	Buenaventura	Cristobal	Ballast	.....	130	69
Eastern Sailor	11	21.25	12	7.35	12	14.55	12	15.37	American	Williams, Dimond & Co. (S. B.)	415.0	55.7	23.6	Portland	Havre	Ties, pine	(9)	7,704	5,707
John Worthington	12	9.00	12	12.25	12	22.15	12	22.15	American	Standard Oil Co. of N. J.	462.4	60.2	27.6	San Francisco	New York	Gas, oil	11,400	.....	.....
Trinity	11	13.27	13	6.38	13	13.55	13	13.55	American	United States Navy	477.0	60.1	.....	Balboa	Port Arthur	Ballast	.....	.....	.....
Gallic	12	13.29	13	7.38	13	15.45	13	18.10	British	White Star Line	450.0	58.5	24.6	Auckland	London	General	4,906	8,132	5,299
Raithwaite	12	14.00	13	7.54	13	17.05	13	18.34	British	Leslie Shipping Co.	325.0	47.1	22.0	San Antonio	Savannah	Copper, etc	4,535	3,358	2,400
Canastota	13	2.30	13	8.26	13	18.00	13	23.50	British	Canastota Steamship Co.	405.0	52.3	23.0	Sydney	New York	General	7,000	5,525	4,110
Remuera	13	2.15	13	8.47	13	18.55	14	6.30	British	New Zealand Shipping Co.	485.0	62.3	26.0	Auckland	London	Meat, general	6,260	11,664	8,776
Grangepark	13	13.55	14	6.29	14	14.45	14	18.08	British	J. & J. Denholm	400.4	52.3	24.0	Cerro Azul	Liverpool	Sugar	7,050	5,710	4,017
Tranquebar	13	22.00	14	7.48	14	15.50	14	17.58	Danish	Orient Steamship Co.	370.0	47.5	22.4	Valparaiso	Copenhagen	Nitrates	5,338	4,397	3,209
Port Caroline	14	1.00	14	8.15	14	15.47	14	20.25	British	Commonwealth and Dom. Line	480.7	62.4	26.0	Wellington	London	Frozen, general	9,000	10,740	7,829
Palena	14	5.30	14	8.28	14	16.13	...	.....	Chilean	South American Steamship Co.	350.0	42.1	22.0	Talcahuano	Cristobal	General	355.37	3,666	2,577
Sag Harbor	8	14.05	14	8.37	14	16.57	14	21.25	American	Tracy Steamship Co. (S. B.)	264.0	42.2	14.6	Acajutla	Norfolk	Ballast	.....	2,504	1,701
Harold Dollar	13	22.15	14	8.47	14	17.27	14	23.05	British	Dollar Steamship Co.	376.5	52.2	23.1	Singapore	New York	General	6,049	5,224	3,940
Cecil County	12	15.43	14	13.53	14	21.18	14	21.18	American	Chambers Shipping Co.	431.0	59.2	.....	Balboa	Tampico	Ballast	.....	.....	.....
Hague Maru	14	15.35	15	6.42	15	14.55	15	15.50	Japanese	Osaka Shosen Kaisha	407.3	50.8	22.0	Singapore	New York	General	4,855	.....	.....
North American	14	6.00	15	6.49	15	15.30	....	.....	British	American Metals Transport	251.0	43.6	20.0	Arica	New York	Metals, etc	3,200	2,444	1,571
West Kedron	14	17.20	15	7.19	15	16.06	15	18.30	American	Williams, Dimond & Co. (S. B.)	410.5	54.3	24.0	San Francisco	Antwerp	General	5,922	6,572	4,900
Mina Brea	25	12.30	15	8.49	15	16.50	15	19.45	British	International Petroleum Co.	360.3	49.2	18.0	Talara	Port Lobos	Ballast	.....	4,437	2,688

[9] 4,200,000 ft. B. M.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

(Continued on page 332, column 2.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending January 15, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Balboa	Colombian Maritime Co.	January 9	January 15	1	1
Acajutla	Pacific Steam Navigation Co.	January 10	January 10	10	.....
San Jose	Pacific Mail Steamship Co.	January 11	January 12	.....	7
Laura C. Hall	Colombian Maritime Co.	January 11	January 12	21	.....
Trinity	United States Government	January 11	January 13	12,000	.....
Cecil County	United States Shipping Board	January 12	January 14	10,000	.....

Weather Conditions in December, 1920.

The rainfall for the month was below normal everywhere in the immediate vicinity of the Canal, dry season conditions beginning during the second week and continuing to the end of the month. Totals ranged from 1.31 inches at the station at the mouth of the Rio Boqueron, to 8.02 inches at Porto Bello (extreme outlying stations in the Republic of Panama not included). The greatest amount of rainfall on any one day was 2.81 inches at Porto Bello on the 2d. Bocas del Toro on the same day recorded 6.48 inches.

The estimated rainfall over the Gatun Lake watershed was 3.10 inches, compared with a 10-year mean of 4.77 inches. Over the Chagres River watershed above Alhajuela it was 4.05 inches, compared with a 19-year mean of 8.98 inches.

The air temperature, daytime cloudiness, and sea temperature were slightly above normal, while the atmospheric pressure and relative humidity were slightly below the average. The wind movement was approximately normal. The evaporation was above normal at Balboa Heights, and below normal over the Gatun Lake surface.

A few fogs were observed at interior stations; all of them lifted or were dissipated by 8 a. m.

Seismic tremors were recorded on the 8th, 10th, and 16th.

Gatun Lake hydrology—Mean elevation of Gatun Lake was 86.95 feet; maximum, 87.04 feet on the 17th; minimum, 86.76 feet on the 1st; evaporation from Gatun Lake surface, 4.311 inches; rainfall on Gatun Lake drainage basin, 3.10 inches; total yield of Gatun Lake watershed, 3.77 inches, on the watershed, amounting to 122 per cent of the rainfall.

Climatological conditions at the representative stations are summarized in the following table:

Stations.	Pressure (reduced to mean of 24 hours).	Temperature. Mean.	Temperature. Maximum.	Temperature. ate.	Temperature. Minimum.	Temperature. Date.	Mean relative humidity.	Precipitation. Total inches.	Precipitation. Station average.	Precipitation. Days with .01 inch or more.	Wind. Total movement (miles).	Wind. Prevailing direction.	Wind. Maximum velocity in miles.	Wind. Direction.	Wind. Date.
Balboa Heights	29.830	80.4	90	Dec. 20	71	Dec. 13	82.8	1.94	4.08	13	5,508	N.W.	26	N.	Dec. 16
Colon	29.840	81.4	88	Dec. 6	73	Dec. 13	79.2	2.06	11.41	20	9,414	N	28	N.E.	Dec. 30
Gatun	.....	79.8	90	Dec. 1	72	[1]Dec. 11	....	3.26	9.66	20	4,892	N.	24	N.	Dec. 16
Gamboa	.....	79.4	89	[1]Dec. 23	69	[1]Dec. 10	....	3.05	6.45	14	3,943	N.E.	28	N.W.	Dec. 16

[1] And other dates.

Weather Notes for the Year 1920.

The following is a summary of the weather conditions during the calendar year 1920:

Rainfall for the year 1920 was near the normal over the Pacific section, the northern part of the Central section and the upper Chagres valley, but considerably below normal over the Atlantic section and southern part of the Central section. January and February were the months of least rainfall, while the month of greatest rainfall varied in the different sections from August to November. Annual totals ranged from 56.54 inches at Taboga to 136.61 inches at Porto Bello. The greatest amount of precipitation recorded on any one day was 10.50 inches at Porto Progreso in Chiriqui Province, Panama, on November 11.

The air temperature, wind movement, sea temperature, and evaporation were slightly above the normal, while the atmospheric pressure and relative humidity were slightly below the normal. The daytime cloudiness was slightly above normal on the Atlantic Coast and slightly below on the Pacific side.

The 4 months dry season rainfall for 1920 was the driest since American occupation being slightly lower than the 1912 dry season rainfall.

A hail storm occurred at Las Cascadas on July 24, and on July 25 a storm of the tornado type accompanied by hail swept over San Carlos, Panama, causing considerable damage to buildings and minor injuries to inhabitants.

Severe electrical storms occurred on both coasts on August 15, accompanied by hail on the Pacific side.

Thirty-five seismic disturbances were recorded at Balboa Heights during the year.

Gatun Lake hydrology—Mean elevation of Gatun Lake was 84.85 feet; maximum, 87.04 feet on December 17; minimum, 81.65 feet on May 28. The evaporation from Gatun Lake surface during the 12 months aggregated 59.258 inches, while the rainfall on the Gatun Lake drainage basin averaged 95.77 inches. The total yield of the Gatun Lake watershed was 56.02 inches on the watershed, and amounted to 58 per cent of the rainfall.

The following is a summary of the rainfall for the last 3 years:

Stations.	1918.	1919.	1920.	Station average.	Years of record.	Rainy days, 1920.
Pacific section:						
Balboa	50.90	57.59	64.28	67.78	22	156
Balboa Heights	54.82	61.15	66.43	69.31	23	150
Miraflores	64.22	58.12	80.63	79.66	12	166
Pedro Miguel	66.09	63.20	81.23	80.17	13	179
Rio Grande	74.97	76.87	80.64	84.04	16	178
Central Section:						
Culebra	80.94	74.98	89.63	87.12	30	175
Camacho	83.49	74.75	86.05	87.63	14	160
Empire	82.89	69.63	87.80	80.90	16	198
Gamboa	75.47	62.02	94.88	90.93	38	190
Juan Mina	82.13	88.80	97.29	93.37	10	180
Alhajuela	83.25	81.51	99.20	100.44	21	206
Vigia	91.58	75.85	103.01	102.72	12	220
Frijoles	91.20	95.33	93.96	99.44	9	.....
Trinidad	73.94	79.05	85.70	103.64	13	191
Monte Lirio	105.89	98.47	85.15	118.37	13	214
Atlantic Section:						
Gatun	101.19	90.91	80.31	119.80	16	214
Brazos Brook	127.12	100.39	97.06	130.06	14	201
Colon	125.27	100.82	110.54	128.09	50	217
Porto Bello	.....	147.45	136.61	160.70	9	277
Bocas del Toro	124.53	114.29	135.14	114.66	12	226

Storage of Water in Gatun Lake for the Dry Season.

In preparation for the dry season, which extends from the latter part of December to about the middle of April, the operation of the spillway of Gatun Lake was regulated in the early part of December to bring the surface of the lake to its maximum storage level, 87 feet above mean sea level. The surface reached elevation 87 feet on December 7, and was maintained there until December 23, when, with a shortage of run-off, the surface went down to 86.90 feet. A rain on the 28th brought it up again to 87, but it had gone down again to approximately 86.47 on the 18th of January.

The area of Gatun Lake at its normal elevation of 85 feet, 2 feet below the storage maximum, is 163.4 square miles. At 86 feet the area of water surface is 165.4 square miles, and at 87 feet it is 167.5 square miles. The quantity of water necessary to raise the surface from 85 to 86 feet is 4.60 billion cubic feet, and the quantity to raise it from 86 to 87 feet is 4.65 billion cubic feet. The storage of 2 feet of depth represents the storage of 9.25 billion cubic feet, which is the quantity consumed in 1,240 lockages, considering 7.42 million cubic feet as the average quantity consumed in a lockage. In addition to the water stored, the run-off from the lake watershed during the dry season is ordinarily in excess of evaporation. It is considered that the minimum level for convenient operation is 80 feet, giving 40 feet of water in Gaillard Cut; but as about 95 per cent of the ships using the Canal draw less than 30 feet of water, there is a wide margin for practical

operation. The 7 feet of water between this and the maximum level provides 31.95 billion cubic feet of water for consumption during the dry season. It has been calculated that this will provide, along with the consumption of water for the present hydroelectric generation and municipal purposes, enough water to handle 1,925 lockages, or approximately 16 lockages per day for the average dry season. During the entire calendar year 1920, when 2,814 commercial and 221 United States Government vessels (exclusive of Canal equipment) passed through the Canal, the total number of lockages was 2,831. The dry season is about a third of the year; and during the two-thirds which are "rainy" there is a surplus of water which is wasted.

The term "lockage" refers to the amount of water necessarily drawn from Gatun Lake in passing ships through all locks in a given period of time. With two ships in a lock chamber simultaneously, but one expenditure of water is necessary. It has been found that with usual chance in the arrival of small and large vessels, 24 lockages may be equivalent to 30 ships.

For the Relief of European Children.

In compliance with a request from the European Relief Council, representing the American Relief Administration, the American Red Cross, the American Friends' Service Committee, the Federal Council of the Churches of Christ, the Young Men's Christian Association, the Young Women's Christian Association, the Knights of Columbus, and the Jewish Joint Distribution Committee, which are affiliated under the chairmanship of Mr. Herbert Hoover, employees of The Panama Canal and the Panama Railroad Company on the Isthmus are endeavoring to raise a fund of $10,000 to be contributed to the work of feeding and furnishing medical care to approximately 3,500,000 children in central and western Europe.

The committee of employees in charge was formed from volunteers who responded to a call from the Acting Governor, addressed to the various social and welfare organizations of employees. The committee thus organized elected Mr. R. W. Glaw its treasurer, and contributions are being paid to him. Up to the present the money actually received amounts to about $3,200, leaving about $6,800 yet to be contributed.

Mr. Hoover, in emphasizing the need of speedy assistance to enable the children to live until the next harvest, said in part:

> "Children 8 years old have not attained the size of a 3-year-old baby. Their puny bodies have only a vestige of strength. Many of them can not stand upon their feet, but crawl like little animals. Of such fuel pestilence makes quick work. Tuberculosis and typhus merely touch them and they are gone."

The Council has arranged that all the money contributed shall go direct to the relief work, and none be spent in organization expenses, which are otherwise provided for; and that for every dollar contributed from outside, the government of the country in which it is spent shall furnish $2 worth of local supplies and transportation.

Accessions to the Canal Library.

The following are among the books that have been added to the Panama Canal Library recently:

Bashford, J. W., "China; an interpretation;" Bazalgette, Leon, "Walt Whitman, the man and his work;" Bennett, Arnold, "How to live on 24 hours a day;" Beresford, John Vavys, "H. G. Wells;" Booy, Theodore Hendrik Nikolaas de, "The Virgin Islands, our new possessions;" Boynton, P. H., "History of American literature;" Brady, C. T., "The man who won;" Butler, N. M., "Is America

worth saving?" Cadby, Will, "Switzerland in winter;" Chapman, Charles Edward, "A history of Spain;" Church, Irving Porter, "Notes and examples in mechanics;" Conrad, Joseph, "Almayer's folly;" Conrad, Joseph, "The nigger of the *Narcissus*;" Conrad, Joseph, "Tales of unrest;" Conrad, Joseph, "Typhoon;" Cooper, Clayton Sedgwick, "Understanding South America;" Cuthbert, Father, "Life of St. Francis of Assisi;" Darton, F. J., "Arnold Bennett;" Davies, E. C., "Tales of Serbian life;" Davis, Richard Harding, "Three gringos in Venezuela and Central America;" Dynes, S. A., "Socializing the child;" Elliott, Lillian Elwyn, "Brazil to-day and to-morrow;" Emerson, Ralph Waldo, "Representative men; seven lectures;" Franck, Harry Alverson, "Zone policeman 88;" Franklin, Benjamin, "Benjamin Franklin; his life, written by himself;" Haggard, H. Rider, "Lysbeth;" Harger, Wilson Gardner, "Handbook for highway engineers;" Head, Joseph, "Everyday hygiene;" Hewlett, Maurice Henry, "The outlaw;" Howells, W. D., "My Mark Twain;" Huntington, E. V., "Handbook of mathematics for engineers;" Jones, F. A., "Thomas Alva Edison;" Kaye-Smith, Sheila, "John Galsworthy;" Kipling, Rudyard, "Letters of travel;" Knibbs, H. H., "Tang of life;" Latzko, A. A., "The judgment of peace;" Lee, Sir Sidney, "Life of William Shakespeare; "Locke, W. J., "House of Baltazar;" Lodge, H. C., "Daniel Webster;" Lodge, Sir Oliver, "Man and the universe;" Lowell, Amy, "Sword blades and poppy seed;" Mackaye, P. W., "Jeanne d'Arc, a drama;" Mackaye, P. W., "The present hour;" Maurice, Sir Frederick Barton, "The last four months; how the war was won;" Mills, E. A., "The adventures of a nature guide;" "Modern Russian classics;" Moeller, Philip, "Sophie," Morley, Christopher, "Travels in Philadelphia;" Morse, J. T., "Thomas Jefferson;" Muir, John, "Travels in Alaska;" Mulford, C. E., "Man from Bar-20;" Omar Khayyam, "Rubaiyat;" Page, T. N., "The old South;" Palmer, J. L., "Rudyard Kipling;" Parkhurst, Frederic Augustus, "Symbols;" Robinson, A. G., "Cuba, old and new;" Rowbotham, Francis Jameson, "Story-lives of great scientists;" Russell, Charles E., "Bolshevism and the United States; Sandiford, Peter, "Comparative education, studies of the educational systems of six modern nations;" Sasson, Siegfried, "Picture-Show;" Schinz, Albert, "French literature and the great war;" Service, R. W., "Rhymes of a Red Cross man;" Simpson, B. L., "The fight for the republic in China;" Sinclair, Bertrand William, "North of fifty-three;" Sinclair, Bertrand William, "Rim of the world;" Sweetser, Arthur, "Opportunities in aviation;" Tennyson, A. T., "Works;" Thompson, Charles Manfred, "Elementary economics, with special reference to social and business conditions in the United States;" Trent, W. P., "Robert E. Lee;" Ussher, Clarence Douglas, "An American physician in Turkey;" Wallace, W. K., "Greater Italy;" Wheeler, H. F. B., "Boy's life of Lord Kitchener;" Wilcox, Mrs. Ella Wheeler, "Poems of pleasure;" Wilcox, Mrs. Ella Wheeler, "Poems of power."

Parcels for Patients in Ancon Hospital.

The Superintendent of Ancon Hospital authorizes the following.

This hospital is constantly receiving packages, flowers, etc., which are intended for specific patients but which are not delivered promptly, due to the fact that such packages are not properly or sufficiently addressed. In several instances we have received packages for patients who have not been here at all but have been in other hospitals.

It is suggested that on each package for patients should be stated the full name of the patient, the name of the hospital, and, if possible, the section in which a patient. This will insure the package being delivered immediately. If the sender does not know the exact location of the patient in the hospital, all such packages should be delivered to the chief clerk, whose office is open from 8 a. m. to 5 p. m., in order that prompt and proper delivery can be made.

Deceased Employee.

The estate of the following deceased employee of The Panama Canal is now in process of settlement, and any claims against this estate, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due him, should be presented at the office of the Administrator of Estates at once in order that the estate may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. This name will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Norman C. Anderson..	1088	United States...	Ancon.....	Health Department....	January 10, 1921.

Official Circulars.

Change in Departmental Tariff "A."

THE PANAMA CANAL,
PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 27, 1920.

To all concerned—The following change is made in Departmental Tariff "A"—Schedule of Rates for Supplies and Services Furnished to Departments and Divisions of The Panama Canal, Panama Railroad, other Departments of the United States Government, employees, and those entitled to employees' rates, except where otherwise specified:

Class 1—Equipment, Use of.
Item 10.
Pile Drivers, Floating, and Track.
Effective December 13, 1920.

Without crew.....per hour.. $3.00
(Includes material and supplies, repairs, and depreciation.)

JAY J. MORROW,
Acting Governor, The Panama Canal.
2d Vice-President, Panama Railroad Co.

NOTE.—The above change will be included in Supplement No. 3 to Departmental Tariff "A," when this supplement is issued.

Acting Chief Health Officer.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., January 8, 1921.

To all concerned—Effective January 10, 1921, and during the absence of Col. H. C. Fisher, U. S. A., on detached duty, Dr. D. P. Curry will act as Chief Health Officer.

J. J. MORROW,
Acting Governor.

Acting Superintendent of Fortifications.

THE PANAMA CANAL,
FORTIFICATION DIVISION,
BALBOA HEIGHTS, C. Z., December 28, 1920.

To all concerned—Effective January 3, 1921, and during the absence on leave of the undersigned, Mr. G. V. Barril, Assistant Engineer, will be Acting Superintendent of Fortifications with station at Balboa Heights.

F. E. HOLLERAN,
Asst. Engr. and Supt. of Fortifications.

Approved:
JAY J. MORROW,
Acting Governor.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 8, 1921.

CIRCULAR No. 277:

Effective December 31, 1920, Mr. C. Peters is designated an accountable official of The Panama Canal, *vice* Mr. Max Hertz, and as such will account for all nonexpendable property in use by the district quartermaster, Pedro Miguel.

ELWYN GREENE,
Acting Auditor, The Panama Canal.

Approved:
JAY J. MORROW,
Acting Governor.

Scrap Operations.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 24, 1920.

To all concerned—Effective December 1, 1920, all scrap operations at Mount Hope will be discontinued and thereafter all scrap of every description should be delivered to the General Storekeeper at Balboa.

In making shipments, cars should be loaded to capacity wherever possible, and due care should be exercised to keep different classes of scrap separated as much as possible to save expense in handling and classification.

R. K. MORRIS,
Chief Quartermaster.

Receipts for 24-Trip Tickets.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., January 10, 1921.

To all concerned—Please see that all receipts for 24-trip tickets for 1921 are returned to this office at once. In cases where employees are absent on leave, the receipts should be returned promptly upon delivery of the book when they report for duty.

C. A. MCILVAINE,
Executive Secretary.

Effective Date of Employment.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., January 11, 1921.

To all concerned—In submitting information slips to this office covering employments or re-employments on the Isthmus, great care should be exercised to see that the correct effective date of employment is shown. The effective date should be the date the person actually enters on duty, and should correspond with the date shown in the timebook. The inaccuracy of such data tends to delay the preparation of the necessary papers for record, and the subsequent suspension of pay certificates.

C. A. MCILVAINE,
Executive Secretary.

Sailing of the "Gen. Geo. W. Goethals."

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., January 13, 1921.

To all concerned—The steamship *General Geo. W. Goethals* will sail from Cristobal for New York, via Port au Prince, Haiti, on January 20 or 21, at 3 p. m., definite date to be announced later.

S. W. HEALD,
Superintendent.

Supplement No. 1 to P. R. R. Passenger Tariff No. 8.

PANAMA RAILROAD COMPANY,
OFFICE OF AUDITOR,
BALBOA HEIGHTS, C. Z., January 10, 1921.

CIRCULAR No. RA-704:

To all concerned—Under Panama Railroad train schedule No. 31, Fort Clayton is officially designated as Station No. 43, whereas, on Panama Railroad Passenger Tariff No. 8 Miraflores and Fort Clayton are shown as same station, No. 42, for which the same passenger rates applied up to the present time.

Commencing January 12, 1921, the following rates will apply to and from line stations and Fort Clayton, and the rates as shown on Passenger Tariff No. 8, opposite Station No. 42, will apply to Miraflores:

STATION.	First class. Commercial.	Army and Navy.	Second class.
Colon	$2.15	$1.30	$1.10
Mount Hope	2.05	1.25	1.05
Fort Davis	1.85	1.10	.95
Gatun	1.80	1.10	.90
Monte Lirio	1.40	.85	.75
Frijoles	1.10	.65	.55
Darien	.90	.55	.45
Gamboa	.65	.40	.35
Summit	.40	.25	.20
Pedro Miguel	.15	.10	.10
Red Tank	.10	.10	.10
Miraflores	.10	.10	.10
Corozal	.10	.10	.10
Balboa Heights	.15	.10	.10
Panama	.25	.15	.15

Attention is also called to the elimination of Paraiso Station from Timetable No. 31. No tickets, therefore, should be sold to this point, Pedro Miguel being the nearest station.

Agents should change their rate cards and posters accordingly.

ELWYN GREENE,
Acting Auditor, The Panama Canal.

Approved and compliance directed:
S. W. HEALD,
Superintendent.

Postal Address of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Fortification Division.

OFFICE OF THE DISTRICT ENGINEER,
BALBOA HEIGHTS, C. Z., December 28, 1920.

Effective January 3, 1921 and during the absence of Mr. F. E. Holleran on leave, Mr. G. V. Barril will perform the duties of principal Assistant Engineer, Fortification Division, reporting to the District Engineer.

Effective January 3, 1921, Mr. H. L. Bridges, General Foreman, is placed in general charge of the Atlantic Field Office, Fortification Division, *vice* Mr. G. V. Barril, Assistant Engineer, transferred to other duties. Mr. Bridges will report to the District Engineer Office, Balboa Heights.

C. S. RICHE,
Colonel, Corps of Engineers.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., January 10, 1921.

The following insufficiently addressed mail matter has been received in the office of the Director of Posts and may be obtained upon request of the addressee. Request for forwarding may be made by telephone, calling No. 182, Balboa:

Babbitt, W. H.
Bailey, E.
Baker, Rev. Frank L.
Beckles, Miss Louise
Bixby, Georgia Minnie
Blair, G.
Boomer, George
Brown, George Alfred
Burke, Frank
Burke, Henry S.
Calgeras, Georges
Campbell, Doris M.
Cavanaugh, F.
Clarke, Waldo
Coyle, S. B.
Coyle, Dr. E. T.
Crawford, Dacas
Diaz, Juan, Box 307
Dobert, E.
Dowling, Chas. E.
Edwards, C. H.
Ellis, R. F.
Francis, Charles
Garrett, Mrs. Alice M.
Gregg, R. O.
Hansen, Mrs. Elizabeth
Heil, William
Herman, Mrs. George
Holt, Mrs. R. L.
Johnson, Wm., Box 869
Jones, George A.
Joseph, Stephen
Kenyon, A. J.
Lyons, Mrs. Harry
McConigie, Mary
McKay, R. F.
Mandes, Maria Rosia
Miller, Franklin C.
Moritz, Mrs. A. K.
Murray, Harriet J.
Nallon, W. C.
Neilsen, Miss D.
Patchet, Mrs. Helen
Pullen, William
Pullen, Mrs. DeWitt
Rasmussen, J. M.
Read, R. F.
Seymour, Robert
Seymour, Harry
Sharp, Mrs. Nellie K.
Shong, Roger
Smith, S. F.
Talbot, Frank S.
Tatum, R. N.
Van Zants, Mrs. John
Williams, Joseph S.
Williamson, Anna
Willis, C.

BALBOA HEIGHTS, C. Z., January 17, 1921.

Allen, Mrs. P.
Anderson, Mrs. Carl
Barrett, Mrs. A. L.
Blake, Mrs. Edmund
Butcher, Phillip D.
Carmichael, Ezekiel
Cavanaugh, Frank
Eyers, Frank B.
Lamaire, Mr.
Lamarque, Enrique
Lawrence, Mrs. S. W.
Liscomb, Joseph
McKibbin, Mildred
Malone, Mrs. Mary
Martin, Sidney
Millet, J. Pat
Mitchell, George H.
Piet, Edward
Pool, Henry P.
Ragner, William O.
Ritchey, John L.
Seale, John W. Christopher
Skoflich, Peter
Symons, W. Fred
Verney, Mercedes

Shipping Commissioner's Sale.

The Shipping Commissioner, room 305, Administration Building, Balboa Heights, C. Z., will accept bids up to noon, January 31, 1921, for the purchase of the personal effects belonging to the estate of George Fearns, deceased American seaman. The property to be sold is listed below, and bids may be made for the entire lot of the effects, or be limited to individual articles. Prospective bidders desiring to examine the effects should apply to the Shipping Commissioner's office on any business day. Bids should be submitted in sealed envelopes, addressed to the Shipping Commissioner, marked "Bid on effects of George Fearns, deceased." No advance deposit of money is required, and the right is reserved to reject any and all bids.

One bag, canvas; 1 belt, leather; 1 cap, black cloth; 1 coat, blue serge; 2 collars; 1 derby; 5 drawers, pairs; 2 handkerchiefs; 2 necktics; 1 pants, pairs, blue serge; 5 pants, pairs, blue, work; 3 shoes, pairs; 8 shirts; 7 socks, pairs; 2 suits, pajamas; 7 undershirts; 2 union over suits, work; 2 vests.

Rainfall from December 1 to December 31, 1920, Inclusive.

STATIONS.	Maximum in 1 day.	Date.	Total.
Pacific section—	*Ins.*		*Ins.*
Balboa	0.45	15	2.39
Balboa Heights	.60	7	1.94
Miraflores	.86	2	2.42
Pedro Miguel	.36	3	1 46
Rio Grande	.49	31	1.68
Central section—			
[1] Culebra	.60	31	1.89
[1] Camacho	38	31	1.83
Empire	.40	28	1.56
Gamboa	1.71	6	3.05
[1] Juan Mina	1.22	6	2.15
Alhajuela	1.35	6	2.63
[1] Vigia	1.06	6	2.12
[1] Darien	1.16	4	4.35
Trinidad	.42	31	2.51
[1] Monte Lirio	1.14	7	3.32
Atlantic section—			
Gatun	.64	2	3.26
[1] Brazos Brook	.77	14	3.00
Colon	.35	6	2 06
[2] Bocas del Toro	6.48	2	18.49
[1] Porto Bello	2.81	2	8.02

[1] Standard rain gauge—readings at 5 p. m. daily.
Automatic rain gauge at unstarred stations—values, midnight to midnight.
[2] Standard rain gauge—readings at 8 a. m. daily.

December Rainfall for Three Years.

Stations.	INCHES. 1918	1919	1920	Station average.	Years of record.	Rainy days, 1920.
Pacific section—						
Balboa	1.42	1 13	2.39	5.16	22	16
Balboa Heights	.55	1 81	1.94	4.08	24	13
Miraflores	1.93	4.11	2.42	6.05	13	8
Pedro Miguel	1.09	3.22	1.46	5.12	13	12
Rio Grande	.31	5.90	1.68	5.12	16	8
Central section—						
Culebra	.39	3.42	1.89	6 62	31	5
Camacho	.35	3.67	1.83	5.22	15	11
Empire	.38	2.43	1.56	4.62	17	16
Gamboa	1.25	3.69	3.05	6.45	38	14
Juan Mina	.48	4 39	2.15	4.46	11	8
Alhajuela	.27	2.44	2.63	5.63	22	18
Vigia	.13	1.82	2.12	4.17	13	15
Frijoles	1.35	5 92	2.55	5.31	9	....
Trinidad	.91	5.64	2.51	7.35	13	19
Monte Lirio	1.04	7.73	3.32	8.39	14	20
Atlantic section—						
Gatun	1.92	6.62	3.26	9.66	16	20
Brazos Brook	1.73	6.79	3.00	10.28	15	15
Colon	1.90	7.37	2.06	11.41	50	20
Porto Bello	.....	6.46	8.02	17.66	9	26
Bocas del Toro	14.92	18.42	18.49	13.89	12	19

Additions to Commissary Stock.

Dry Goods Section.

Calendars, 1921, ea	$0.29
Dress goods:	
Shirting, white, "Duro," yd	.80
Flannelette, striped, 31", yd	.45
Handkerchiefs, 18" x 18", men's, hemstitched, linen, ea	.33
Handkerchiefs, cotton, ea	.15
Handkerchiefs, men's, Irish linen, initial, ea	.68
Handkerchiefs, men's, Irish linen, ea. .25 and	.65
Handkerchiefs, Irish linen, ladies', ea. .64 and	.83
Handkerchiefs, initial, ladies', Irish linen, ea	.36
Handkerchiefs, ladies', variety, Irish linen, ea. .19, .31, .38, .42, .48, .60, .63,	.80
Hose, ladies', black cotton, pr	.35
Needles, steel, sizes 7/11, (25), tube	.06
Pencils, Eversharp, vest pocket, No. 54, sterling silver, hand engraved, ea	3.55
Pencils, Eversharp, vest pocket, sterling silver, hand engraved, No. 54-S, ea	3.15
Pencils, Eversharp, vest pocket, sterling silver, hand engraved, No. 54-SW, ea	3.55
Suiting:	
Serge, English, indigo blue, all wool, 55/56", yd	5.45
Serge, blue, 58", yd	4.90
Serge, indigo blue, 56/8", yd	5.55
English alpaca, white, 54", yd	2.45
Alpaca, white, 54", yd	3.10
Serge, olive drab, 54", yd	5.95
Tussore, cotton, yd	1.65
Tussore, yd	1.15
Bleached cotton, 36", yd	.57
Bleached cotton drill, yd	.74
Blue serge, indigo, yd	5.25
Fancy worsteds, yd 6.05 and	6.60
White serge, yd	7.30
Worsted, yd	6.70
Suspenders, No. 10, Guyot, pr	.44
Suspenders, No. 11, Guyot, pr	.47

Hardware Section.

Athletic goods:	
Balls, golf, "Colonel," mesh 31 and 29 sml. and 29 std, ea	.47
Gloves, boys', infielder's, ea	1.15
Masks, baseball, sun protector, ea	7.90
Mitts, baseman's, Spalding, ea	4.40
Mitts, catcher's, boys', Spalding, ea	1.80
Plates, shoe, baseball, pr	.51
Boilers, coffee, ea	1.70
Carriages, baby, sulkies, 2-wheel, ea	22.20
Jars, candy, glass, ea	1.40
Ladles, lard, aluminum, 4" x 10", ea	1.45
Liquid veneer, 12-oz. bot	.43
Liquid veneer, qt. bot	.89
Mops, liquid veneer, ea	1.45
Sets, ice tea, glass, set 4.20 and	4.65
Stoves and accessories—Tops, 4-burner, Florence stove, ea	3.60
Swabs, mop, liquid veneer, ea	.75
Vases, glass, ea .35 and	1.05
Fishing tackle:	
Rods, fishing, telescope, steel bait, 10-foot, ea	4.30
Rods, fishing, telescope, steel bait, maple handle, 12', ea	5.10
Rods, fishing, telescope, steel bait, maple handle, 10', ea	5.10

Boot and Shoe Section.

Patent Theo ties, ladies', short vamp, pr	7.75
Gun metal Theo ties, ladies', short vamp, pr	8.35
Shoes, men's, brown, vici kid bluchers, pr	12.95
Shoes, men's, gun metal Oxfords, pr	10.15
Sandals, infants', black kid, sizes 2 to 8, pr	1.20
Sandals, infants', tan kid, sizes 2 to 8, pr	1.25
Sandals, infants', white kid, sizes 2 to 8, pr	1.35
Sandals, infants', Champagne kid, sizes 2 to 8, pr	1.25
Sandals, infants', gray kid, sizes 2 to 8, pr	1.25
Boots, infants', black, button, sizes 2 to 8, pr	1.40
Boots, infants', tan, button, sizes 2 to 8, pr	1.40
Boots, infants', white, button, sizes 2 to 8, pr	1.75
Boots, infants', gray, button, sizes 2 to 8, pr	1.55

MOVEMENTS OF OCEAN VESSELS.—Continued from page 325.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
January 9	Toloa	United Fruit Co.	Port Limon.
January 9	Teviot	Royal Mail Steam Packet Co.	Port Limon.
January 11	Cartago	United Fruit Co.	New Orleans.
January 11	Colon	Panama Railroad Steamship Line.	New York via Haiti.
January 11	Eagle No. 4[10]	United States Navy	Cartagena.
January 12	Beaver	United States Navy	Norfolk.
January 12	Atenas	United Fruit Co.	New Orleans via wayports
January 12	La Navarre	French Line	St. Nazaire and wayports
January 13	L. J. Drake	Standard Oil Co.	Tampico.
January 13	Caribbean	Panama Railroad Cattle Industry.	Cartagena.
January 14	Calamares	United Fruit Co.	New York via wayports.
January 15	Anthony D. Nichols[11]	Astoria Mahogany Co.	Bluefields.
January 15	San Mateo	United Fruit Co.	Port Limon.
January 15	Antillian	Leyland Line	Liverpool via wayports.

[10] Subchaser. [11] Schooner. [12] And barge *Darien*.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—
January 8	Balboa	Colombian Maritime Co.	Buenaventura.
January 12	Dolphin	United States Navy	Callao.
January 12	S-7[8]	United States Navy	Sea.

*DEPARTURES.

Date.	Vessel.	Line.	For—
January 9	Toloa	United Fruit Co.	New York via Habana.
January 9	Caribbean	Panama Railroad Cattle Industry.	Cartagena.
January 9	Crijnssen	Royal Netherlands W. I. Mail	Amsterdam and wayports.
January 9	Gold Star	The Panama Canal	Port Limon, C. R.
January 12	Achilles[12]	Panama Railroad Steamship Line.	Norfolk.
January 12	Atenas	United Fruit Co.	New Orleans.
January 13	Cartago	United Fruit Co.	New Orleans, Bocas del Toro, and Habana.
January 15	La Navarre	French Line	Puerto Colombia.
January 15	Calamares	United Fruit Co.	New York, Port Limon. and Habana.
January 15	San Mateo	United Fruit Co.	Boston.
January 9	Bahia Castillo	British Government	Sydney.
January 14	Balboa	Colombian Maritime Co.	Buenaventura.

*Other than ships passing through the Canal.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates, domestic, $1.00 per year; foreign, $1.50; address The Panama Canal Record, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1913, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Volume XIV. Balboa Heights, C. Z., January 26, 1921. No. 24.

Departure of Fleets for the South.

The main portions of the Atlantic Fleet of the United States Navy completed transit through the Canal on January 19 and 20. Details are given in the section, "Atlantic to Pacific," of the table, "Movements of Ocean Vessels," on pages 336 and 337, of this issue. All of the vessels were handled smoothly and without mishap, and with no interference with commercial traffic.

The first line elements of the Atlantic and Pacific fleets, with the train, cleared from Balboa for the cruise to Peruvian and Chilean ports in the morning of January 22. They are due to return February 18.

Fast Voyage from Philadelphia to Los Angeles.

Press reports published in the United States state that the steamship *Julia Luckenbach*, which passed through the Canal on December 23, completed the voyage from Philadelphia to Los Angeles in 15 days and 22 hours. The ship arrived at the Canal at 7 o'clock in the morning and cleared from the opposite end at 4.30 in the afternoon of December 23, having been in Canal waters 9½ hours.

The distance from Philadelphia to the Canal is 1,946 miles; the length of the Canal is 43 miles; and the distance from the Canal to Los Angeles is 2,913 miles; making the total voyage approximately 4,902 miles. The passage of this distance in 382 hours was at an average speed of 12 5/6 knots.

The *Julia Luckenbach* is 436.5 feet in length by 57 feet beam, of 8,543 gross and 6,427 net tons, Panama Canal measurement. At time of passage through the Canal on December 23 she was carrying steel and general cargo amounting to 8,660 tons.

Removal of Bunkering Restrictions for Coal.

THE PANAMA CANAL, DEPARTMENT OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., January 22, 1921.

To all steamship agents—Bunkering restrictions for coal are hereby removed and vessels may be hereafter bunkered in accordance with their desires.

The Marine Superintendent takes this opportunity to thank the steamship agents for their patience and cooperation during the fuel stringency on the Isthmus.

E. P. JESSOP,
Marine Superintendent.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending January 22, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Vulcan	United States Government	January 16	January 22	1,000	.....
Betsy Bell	United States Shipping Board	January 19	.....	7,547	.....
Sussex	Federal Steamship Line	January 19	.....	11,000	.....
Acajutla	Pacific Steam Navigation Co	January 21	January 21	.....	15
City of Para	Pacific Mail Steamship Co	January 21	January 21	81	14
Balboa	Colombian Maritime Co	January 22	January 22	4	.....

Commercial Traffic Through the Panama Canal During Calendar Year 1920, by Trade Routes.

ATLANTIC TO PACIFIC.

Route.	Total number of vessels.	Panama Canal net tonnage.	Tons of cargo.	Vessels in ballast.	Panama Canal net tonnage.
East coast of United States to west coast of South America	334	1,089,405	893,393	105	361,791
Cristobal to west coast of South America	189	290,174	114,445	16	14,778
East coast of United States to Far East	188	[1] 920,906	1,350,273	1	[1] 7,700
Europe to west coast of South America	131	[2] 483,529	259,921	39	[2] 88,779
United States coastwise	116	448,734	416,819	9	19,505
Mexico to west coast of South America	81	401,590	659,777	2	8,042
United States to Australasia	78	404,864	532,297	.....	.....
Europe to west coast of United States	65	289,675	110,401	34	137,896
Europe to Australasia	51	[3] 339,019	310,876	4	[3] 5,668
Cristobal to west coast of Central America	24	15,212	15,102	1	185
Cristobal to west coast of United States	22	40,871	38,680	2	2,344
West Indies to west coast of South America	13	[4] 10,539	12	12	[4] 10,517
Mexico to west coast of United States	13	74,376	129,510	.....	.....
East coast of United States to west coast of Canada	13	61,091	92,371	.....	.....
East coast of United States to Hawaii	13	64,216	99,813	.....	.....
East coast of United States to Philippine Islands	8	36,826	55,144	.....	.....
Miscellaneous trade routes	75	202,973	190,516	23	35,274
Totals	1,414	5,174,000	5,269,350	248	692,479

[1] One Japanese cruiser of 7,700 tons displacement not included in Panama Canal net tonnage.
[2] One British cruiser of 5,794 tons displacement not included in Panama Canal net tonnage.
[3] Two British cruisers of 38,133 tons displacement not included in Panama Canal net tonnage.
[4] Two British cruisers and 1 Spanish battleship of 11,937 and 15,000 tons displacement respectively, not included in Panama Canal net tonnage.

PACIFIC TO ATLANTIC.

Route.	Total number of vessels.	Panama Canal net tonnage.	Tons of cargo.	Vessels in ballast.	Panama Canal net tonnage.
West coast of South America to east coast of United States	292	948,342	1,447,849	7	28,557
West coast of South America to Cristobal	198	317,070	251,451	12	1,603
West coast of South America to Europe	197	818,678	1,062,702	11	1,323
United States coastwise	122	528,004	644,833	16	97,457
West coast of United States to Europe	115	515,609	749,447	1	406
Australasia to Europe	75	[1] 529,338	459,527	1	([1])
West coast of South America to Mexico	73	368,994	3,186	72	367,155
Far East to east coast of United States	71	327,887	477,640	2	6,845
West coast of Canada to Europe	30	92,411	129,909	.....	.....
West coast of Central America to Cristobal	29	18,907	16,054	.....	.....
Australasia to United States	25	150,150	156,015	.....	.....
West coast of United States to Cristobal	22	40,020	21,435	.....	.....
West coast of United States to Mexico	22	114,193	6,000	21	108,874
West coast of South America to West Indies	15	28,495	46,542	3	379
Philippines to east coast of United States	10	45,439	72,350	.....	.....
West coast of United States to Africa	9	41,934	60,476	.....	.....
Hawaii to east coast of United States	4	15,439	24,262	.....	.....
Miscellaneous trade routes	91	[2] 303,355	337,091	10	[2] 64,557
Totals	1,400	5,204,265	5,966,769	165	677,156

[1] British cruiser *Renown* of 31,559 displacement tonnage not included in Panama Canal net tonnage.
[2] Two British cruisers of 10,004 tons displacement not included in Panama Canal net tonnage.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended January 22:

Steamship *Marne*, general repairs and rebuilding; launch *Captain Wilhelm*, hull repairs and installation of new engine; dredge *No. 84*, general repairs; tug *Bohio*, general repairs and rebuilding; launches *Limon*, general repairs and overhauling; *Santa Rita*, rebuilding; barges *Nos. 132*, *134*, and *135*, general repairs; motor ship *Astoria*, small miscellaneous repairs to engine and crankshaft; mine yawl *No. 101*, hull repairs and overhauling of engine; U. S. S. *Neches*, miscellaneous boiler repairs; tug *Mariner*, docking, staging, cleaning, painting, and miscellaneous repairs; subchaser *No. 284*, docking and miscellaneous repairs; U. S. S. *Cleveland*, miscellaneous repairs; steamship *S. V. Harkness*, miscellaneous heavy repairs; U. S. S. *Dolphin*, small miscellaneous repairs; steamship *Azeus*, repairs to main engine; V. de G. C. *Almirante Latorre*, miscellaneous heavy repairs and docking; motor ship *Siam*, repairs to hull, bilge, and ballast system and docking; U. S. S. *Wyoming*, repairs to ash ejector; U. S. S. *Kennedy*, repairs to main turbines; U. S. S. *Arkansas*, small miscellaneous repairs; U. S. S. *Glacier*, dock, stage, and clean and paint bottom and miscellaneous small repairs.

The following vessels were at the Cristobal shops for repairs during the week ended January 24:

Steamships *Ancon*, *Cristobal*, *General G. W. Goethals*, and *Colon*, miscellaneous repairs and painting to engine, deck, and steward departments; steamship *Siam*, repair tank top, overhaul ballast pump, etc.; launch *Activo*, overhaul engine; steamships *North American*, repair hull, repair winches, blower engine, etc; *Barima*, change from coal to oil burner, repair boiler, oil pumps, etc; schooner *Beulah*, make mast; steamships *Mantaro*, electric weld port boiler, prepare for hydrostatic test, etc.; *Ionic*, repair hatches, services of diver; *Honduras*, rebabbitt and machine crank pin, brasses, and crosshead slipper; tug *Tavernilla*, scale boiler, repair fenders, calk uptake studs, etc.; steamship *Agron*, repair anchor windlass; U. S. S. *Poe*, furnish light and water for cleaning boilers; steamships *Acajutla*, tug *Porto Bello*, steamship *Hayden*, launch *Rodman*, steamship *Caribbean*, schooner *Chiquimala*, U. S. S. *Shawmut*, and launch *Hibiscus*, minor repairs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending January 22, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Caribbean	Panama Railroad Cattle Industry	.....	January 16	.....	17
Arzila	Pacific Steam Navigation Co	.....	January 18	.....	1,770
Palena	Chilean Line	.....	January 18	.....	400
Antillian	Leyland Line	.....	January 18	.....	120
Gen. H. F. Hodges	Panama Railroad Steamship Line	January 16	January 19	1,549	64
Mantaro	Peruvian Line	January 16	.....	1,370	.....
Cauca	Pacific Steam Navigation Co	January 16	January 21	417	302
Kenuta	Pacific Steam Navigation Co	January 17	January 18	3	(1)
Montevideo	Spanish Line	January 17	January 19	276	136
Heredia	United Fruit Co	January 17	January 20	667	198
Colon	Panama Railroad Steamship Line	.....	January 20	.....	1,232
Sixaola	United Fruit Co	January 19	January 20	300	246
Almelo	Royal Dutch W. I. Mail	January 19	January 21	189	(1)
Gen. G. W. Goethals	Panama Railroad Steamship Line	.....	January 21	.....	1,201
Acajutla	Pacific Steam Navigation Co	.....	January 21	.....	506
Ancon	Panama Railroad Steamship Line	January 19	.....	9,987	.....
Cristobal	Panama Railroad Steamship Line	January 20	.....	9,732	.....
Caribbean	Panama Railroad Cattle Industry	January 20	.....	230	.....
Oranje Nassau	Royal Dutch W. I. Mail	January 20	January 21	43	1,556
Ansaldo San Giorgio IV	National Navigation Co	January 20	January 21	37	(1)
City of Para	Pacific Mail Steamship Co	January 21	.....	422	.....
Pastores	United Fruit Co	January 21	January 22	426	6
San Blas	United Fruit Co	January 22	January 22	75	(1)

[1] No cargo laded.

Costa Rica to Accept Identification Certificates in Lieu of Passports for Employees.

The consul for Costa Rica in Colon has advised the Executive Secretary that the Government of Costa Rica has waived the requirement of passports for persons traveling in Costa Rica in so far as it applies to American employees of The Panama Canal and the Panama Railroad Company and the dependent members of their families. In lieu of passports, such persons will need a statement from the Executive Office to the effect that the holder is a citizen of the United States and employed by The Panama Canal or the Panama Railroad Company. A certificate of vaccination from the quarantine officer in either Balboa or Cristobal will also be necessary. These papers must be presented to the Costa Rican consul, who will make a charge of $2 for extending a passport and viséing the vaccination certificate.

A similar procedure will govern in the use of identification certificates for adult members of the families of employees. Minor children will be included in the certificate of an accompanying adult, without extra charge, but children traveling alone will be required to have certificates.

It is no longer necessary to pay $10 for an American passport before leaving Isthmus, or, on returning, to have it viséed by American Consul.

The Costa Rican Government has made the concession of waiving passports for Canal employees and their families in order to reduce the expenses incident on a visit to Costa Rica.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, January 22, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Bridge [1]	15	20.02	16	6.32	16	13.04	22	14.45	American	United States Navy	424.0	55.2	22.6	New York	Callao	Naval supplies	1,517	.....	.....
Collegian	15	4.15	16	6.33	16	14.02	16	14.55	British	Harrison Line	455.0	56.0	17.6	Liverpool	Puget Sound	General	1,770	7,712	5,437
Haynie	16	7.00	16	7.52	16	15.36	16	17.00	American	Sudden & Christensen (S. B.)	402.0	53.0	27.0	Norfolk	San Diego	Coal	8,215	6,524	4,756
Ardmore	14	8.23	17	6.26	17	15.08	17	16.15	American	Standard Oil Co	450.0	60.0	25.0	Tampico	Pisagua	Oil	10,000	8,636	6,321
Kaisho Maru	16	14.17	17	6.42	17	15.55	17	16.55	Japanese	Katsuda Kisen Kaisha	407.0	50.0	26.0	New York	Kobe	General	6,150	6,108	4,565
Eemdyk	16	3.18	17	6.47	17	14.10	17	15.05	Dutch	Holland-American Line	425.0	58.0	21.8	Rotterdam	Los Angeles	General	2,393	8,514	6,066
Promethus	17	6.38	17	7.20	17	17.00	17	17.57	American	United States Navy	450.0	60.1	22.0	Guantanamo	Balboa	Ballast	.....	.....	.....
City of Vancouver	17	18.58	17	12.45	17	19.35	17	20.50	British	Canadian Western Steamship Co.	411.5	54.1	13.6	W. Hartlepool.	Vancouver	Ballast	.....	6,614	4,995
Brazos	17	15.13	17	15.47	18	10.30	23	16.45	American	United States Navy	475.0	56.0	26.0	Guantanamo	Balboa	Oil	7,300	.....	.....
General Getty [2]	.....	.....	17	6.40	17	19.14	.....	.....	American	United States Army	.....	.....	.....	Cristobal	Balboa	.....	.....	.....	.....
Arzila	11	16.07	18	6.30	18	14.02	18	14.50	British	Pacific Steam Navigation Co	285.0	41.3	19.7	Cristobal	Valparaiso	General	1,839	2,856	1,797
Mont Cervin	17	18.23	18	6.40	18	15.33	18	16.50	French	Soc. Gen. Transports Maritime	340.0	49.0	24.0	Marseilles	Vancouver	Sugar, general	5,050	4,070	2,933
Meiwu Maru	17	19.52	18	7.05	18	14.44	18	16.20	Japanese	Taisho Kaiun Kaisha	445.0	58.0	27.6	Port Arthur	Yokohama	Petroleum	8,900	8,299	5,979
Palena	14	16.13	18	9.12	18	16.12	19	18.00	Chilean	South American Steamship Line	350.0	42.0	24.2	Cristobal	Valparaiso	General	400	3,666	2,577
Sussex	11	8.05	18	11.02	18	20.15	.....	.....	British	Federal Steam Navigation Co	420.0	52.0	26.4	Newport	Auckland	General	6,747	7,016	5,078
Betsy Bell	18	13.17	18	13.50	19	10.37	.....	.....	American	Williams, Dimond & Co	402.6	53.2	26.6	Norfolk	San Francisco	Coal	7,547	6,060	4,790
Mason [3]	19	6.10	19	6.18	19	12.52	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Dahlgren [3]	19	6.10	19	6.18	19	12.53	23	21.35	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Semmes [3]	19	6.18	19	6.23	19	13.30	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Graham [3]	19	6.18	19	6.23	19	14.15	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Satterlee [3]	19	6.26	19	6.34	19	13.11	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Goldsborough [3]	19	6.26	19	6.34	19	13.12	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Blakeley [3]	19	6.31	19	6.40	19	13.45	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Bernadou [3]	19	6.31	19	6.40	19	13.47	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Crownshield [3]	19	6.34	19	7.37	19	15.28	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Preble [3]	19	6.34	19	7.37	19	15.34	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
William B. Preston [3]	19	6.37	19	7.40	19	15.37	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Barney [3]	19	6.37	19	7.40	19	15.39	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Black Hawk	19	6.43	19	7.45	19	15.48	22	10.55	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Hector	14	23.23	19	9.10	19	18.28	19	23.40	Dutch	Royal Netherlands W. I. Mail	322.0	44.0	22.6	Amsterdam	Valparaiso	General	3,350	3,677	2,707
Liberator	19	6.58	19	10.04	19	16.56	19	17.48	American	Atlantic Gulf & Pacific Co	410.0	56.0	21.6	Philadelphia	San Francisco	General	5,000	7,708	6,250
Spermina	19	7.05	19	10.10	19	18.45	20	13.40	American	Spermina Shipping Co	349.7	47.1	21.6	Baltimore	Valparaiso	Coal	4,700	3,355	2,679
Trelyon	19	8.12	19	11.04	19	19.25	19	21.00	British	Hain Steamship Co	400.0	52.4	24.0	Avonmouth	Dunedin	General	6,064	5,788	4,100
Santa Teresa	19	12.18	19	11.47	19	19.35	19	20.40	American	W. R. Grace & Co	360.2	51.6	25.6	New York	Valparaiso	General	3,102	5,726	4,086

[1] Supply ship. [2] Tug. [3] Destroyer.

Gen. H. F. Hodges	16	10.27	19	12.35	19	20.45	....	.....	American	Panama Railroad Steamship Line	324.0	39.0	20.0	New York	Guayaquil	General	665	3,013	1,574
Pennsylvania [4]	19	13.55	19	14.10	20	12.24	22	10.55	American	United States Navy	600.0	97.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Utah [4]	19	14.18	19	14.28	20	12.45	22	10.55	American	United States Navy	510.0	88.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Delaware [4]	19	14.25	19	15.55	20	13.47	22	10.55	American	United States Navy	510.0	85.0	.....	Guantanamo	Callao	.....	.....	.....	.....
North Dakota [4]	19	14.33	19	15.55	20	14.01	22	10.55	American	United States Navy	510.0	85.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Oklahoma [4]	19	15.03	19	17.20	20	15.31	22	10.55	American	United States Navy	595.0	95.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Arizona [4]	19	15.05	19	16.56	20	15.21	22	10.55	American	United States Navy	600.0	97.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Dickerson [3]	19	18.34	20	6.20	20	16.35	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Leary [3]	19	13.14	20	6.20	20	16.42	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Herbert [3]	19	18.28	20	6.25	20	17.50	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Schenck [3]	19	17.22	20	6.25	20	17.39	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Nevada	19	14.50	20	6.30	20	16.30	22	10.55	American	United States Navy	575.0	95.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Sicard [3]	19	13.45	20	6.40	20	17.42	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Hatfield [3]	19	6.35	20	6.40	20	17.39	22	10.43	American	United States Navy	310.0	31.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Columbia	19	23.25	20	7.25	20	18.30	22	10.45	American	United States Navy	411.0	58.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Solace	19	23.25	20	7.32	20	17.25	22	15.20	American	United States Navy	377.0	44.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Carabassett	19	23.25	20	8.01	20	18.33	....	.....	American	United States Navy	.....	.....	.....	Guantanamo	Callao	.....	.....	.....	.....
Contoocook	19	23.25	20	8.01	20	18.33	....	.....	American	United States Navy	.....	.....	.....	Guantanamo	Callao	.....	.....	.....	.....
Nereus [5]	19	23.25	20	8.25	20	19.25	22	15.00	American	United States Navy	.....	.....	.....	Guantanamo	Callao	.....	.....	.....	.....
Proteus	19	23.25	20	8.30	20	18.50	22	15.30	American	United States Navy	522.0	62.0	.....	Guantanamo	Callao	.....	.....	.....	.....
Siam [6]	16	23.40	20	10.40	20	19.42	22	19.00	Danish	East Asiatic Steamship Co	410.0	55.2	15.0	Copenhagen	San Francisco	Ballast	.....	7,068	5,303
Rimutaka	19	20.22	20	11.00	20	20.25	20	21.55	British	New Zealand Shipping Co	457.0	58.0	25.8	London	Auckland	General	4,636	9,125	6,848
Heber	19	23.00	20	12.43	20	21.48	....	.....	American	McCormick & McPherson (S. B.)	402.5	53.0	26.9	Norfolk	Bremerton	Coal	8,037	.....	.....
Cauca	16	13.20	21	6.12	21	12.42	22	13.38	British	Pacific Steam Navigation Co	246.0	35.0	13.9	Cristobal	Guayaquil	General	212	1,582	1,023
Almelo	19	20.13	21	6.21	21	13.40	22	20.47	Dutch	Royal Netherlands W. I. Mail	460.0	62.6	19.6	Amsterdam	Valparaiso	General	3,106	9,403	6,653
Republic	20	17.12	21	6.33	21	14.20	21	15.45	American	Chile Steamship Co	350.0	49.0	22.6	Baltimore	Tocopilla	General	3,673	4,623	3,372
Acajutla	10	17.00	21	6.56	21	15.37	21	18.20	British	Pacific Steam Navigation Co	215.7	33.5	13.1	Cristobal	Tumaco	General	490	1,273	706
Caddo	20	18.05	21	7.05	21	15.12	....	.....	American	Standard Oil Co	414.0	55.2	30.7	Tuxpan	Pisagua	Crude oil	8,170	6,438	4,391
Sinasta	20	19.50	21	7.35	21	17.30	23	7.52	American	Barber Steamship Line (S. B.)	402.6	53.0	25.0	New York	Manila	Oil etc	6,907	6,566	4,819
Cherry Branch	20	21.42	21	7.40	21	16.37	21	18.20	British	Nautilus Steamship Co	412.0	52.0	18.0	Liverpool	Valparaiso	General	3,000	5,395	3,982
Ansaldo IV	20	17.26	21	11.13	21	17.55	22	14.50	Italian	Soc. Naz. di Navigazione	377.0	51.0	24.3	Genoa	Valparaiso	General	950	5,473	3,600
West Canon	21	23.55	22	7.10	22	14.53	22	20.40	American	E. C. Evans & Son. (S. B.)	410.5	54.0	25.0	Norfolk	San Francisco	Coal	7,391	6,624	4,877
Treglisson	22	8.17	22	9.13	22	16.38	22	19.35	British	Hain Steamship Co	369.8	51.1	24.0	Newport News	Auckland	Coal	6,187	.....	.....

[4] Battleship. [5] Collier. [6] Motor ship.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Cauca	15	17.20	16	6.55	16	13.20	21	6.12	British	Pacific Steam Navigation Co	246.0	35.2	12.0	Guayaquil	Cristobal	(8)	417	1,582	1,023
Nevada	16	0.30	16	8.25	16	16.18	16	22.57	Danish	United Steamship Co	360.0	50.0	23.0	Caleta Colosa	La Pallice	Nitrates	5,977	4,990	3,558
Argyll	15	18.45	16	8.35	16	15.12	18	13.20	French	De Soleo Line	320.2	40.7	19.0	Santa Rosalia	Tampico	Ballast	.....	3,141	2,096
San Joaquin	16	5.15	16	9.23	16	16.40	16	19.56	Norwegian	W. Wilhelmsen	425.5	57.1	19.6	Taltal	Tampico	Ballast	.....	7,059	5,075
Gen. W. M. Graham [7]	....	.....	16	9.30	16	16.50	....	.....	American	United States Army	.....	.....	.....	Balboa	Cristobal	.....	.....	.....	.....
Port Kembla	16	9.00	16	12.29	16	20.30	16	22.40	British	Commonwealth and Dom. Line	480.0	62.2	28.2	Auckland	London	Frozen and gen.	7,509	10,708	8,116
Gen. G. W. Getty	....	.....	16	7.00	16	13.10	17	6.40	American	United States Army	.....	.....	.....	Balboa	Cristobal	.....	.....	.....	.....
Brush	16	15.15	17	7.51	17	14.42	17	15.45	American	North Atl. & Western S. S. Co.	390.0	54.2	24.0	San Francisco	Philadelphia	Lumber, general	(9)	6,161	4,433

[7] Mine planter. [8] Ivory nuts, cacao, and general. [9] Lumber, 3,800,000 feet B. M.

THROUGH THE CANAL—PACIFIC TO ATLANTIC—continued.

Kenuta	16	15.30	17	8.01	17	16.19	18	6.37	British	Pacific Steam Navigation Co.	401.4	52.2	23.1	Puntarenas	Liverpool	General	5,952	6,440	4,900
Delisle	16	15.15	17	8.13	17	16.20	17	16.20	American	Luckenbach Line (S. B.)	320.8	46.0	18.6	San Francisco	New York	General	2,111	3,803	2,350
Forfar	16	16.00	17	8.23	17	17.21	17	20.42	British	Ed. Edwards & Son	348.5	50.1	21.0	Taltal	Brest	Nitrates	5,622	4,097	3,000
Toba Maru	16	23.00	17	8.57	17	16.25	17	16.45	Japanese	Nippon Yusen Kaisha	445.0	58.0	17.0	Shanghai	New York	General	2,600	8,058	5,743
Quillwark	17	1.00	17	9.32	17	19.25	17	20.35	American	E. C. Evans & Son (S. B.)	402.5	53.0	24.6	Portland	Naples	Wheat	7,691	6,582	4,882
U.S.S. Kansas [4]	14	6.30	17	9.37	19	15.32	19	19.40	American	United States Navy	450.0	85.0	27.0	Honolulu	Guantanamo				
Mantaro	17	9.50	17	11.39	17	18.44	24	6.40	Peruvian	Peruvian Line	360.0	46.0	19.0	Callao	Cristobal	General	1,370	4,838	2,959
Liberty	17	7.00	17	12.07	17	21.30	18	8.05	American	U. S. and A. Line (S. B.)	395.0	55.0	25.8	Melbourne	New York	Ore, general	8,575	7,280	5,219
Azumasan Maru	17	11.30	17	13.00	17	22.05	18	1.05	Japanese	Kyoto Kisen Kabushiki Kaisha	360.0	48.0	25.0	Antofagasta	Colon [11]	Nitrates of soda	6,422	4,666	3,397
Taiyo Maru	17	7.30	17	13.02	17	22.40	18	5.15	Japanese	Kawachi Goshi Kaisha	343.0	44.0	23.8	Mejillones	Azores [11]	Nitrates	4,600	3,661	2,626
Trontolite	17	3.45	18	6.48	18	16.08	18	16.08	American	Standard Oil Co.	419.5	57.2	26.9	Talara	Halifax	Gasoline	8,463	7,345	5,429
Tairoa	18	8.30	18	11.27	18	18.47	19	15.05	British	Shaw Savill & Albion Co.	477.6	63.1	24.0	Sydney	London	Frozen, general	4,832	11,192	8,149
Annam [6]	18	10.35	18	13.10	18	20.23	18	22.40	Danish	East Asiatic Co.	410.0	55.2	28.0	San Francisco	London	General	8,290	7,069	5,318
Santa Elisa	19	10.15	19	12.00	19	22.17	19	23.25	American	W. R. Grace & Co.	360.3	51.7	24.8	Valparaiso	New York	(12)	3,781	5,957	4,325
Hayden	18	6.49	19	12.42	19	22.26	20	15.55	American	E. C. Evans & Son (S. B.)	402.5	53.0	25.2	N. Westminster	Birkenhead	Lumber	6,243	6,525	4,762
City of Para	20	12.15	21	6.58	21	13.55			American	Pacific Mail Steamship Co.	345.0	38.5	18.0	San Francisco	Cristobal	Merchandise	305	3,739	2,459
Des Moines [10]	14	6.30	21	7.29	21	14.21	21	14.21	American	United States Navy	310.0	35.0	16.0	Puntarenas	New York				
San Francisco [6]	21	2.45	21	8.12	21	16.12	21	21.55	Swedish	Johnson Line	362.0	51.2	23.8	San Francisco	Liverpool	General	5,200	5,298	4,019
Vulcan [5]	16	2.00	21	8.20	21	15.10	23	7.47	American	United States Navy	385.0	53.0	22.0	Puget Sound	Norfolk			5,803	3,140
Spes	20	21.00	21	8.45	21	16.30	21	20.30	Norwegian	S. O. Stray & Co.	226.1	36.5	14.0	Guayaquil	New York	Cacao	1,350	1,273	857
Chiquimula	20	7.00	21	9.56	21	18.38	24	6.58	American	Chiquimula Shipping Co.	176.3	36.1	14.0	La Union	Philadelphia	(13)		716	530
Ionic	21	7.00	21	10.06	21	17.45	23	6.18	British	White Star Line	500.3	63.0	31.0	Wellington	London	General	6,100	12,852	9,590
Surrey	21	9.30	21	10.13	21	19.25	21	21.55	British	Federal Steam Nav. Co. Ltd.	460.0	62.5	24.9	Sydney	London	Frozen, general	5,360	10,000	7,285
Los Angeles	21	21.00	22	8.11	22	14.40	22	17.18	American	Union Oil Co.	435.0	56.2	21.0	Tocopilla	Tampico	Ballast		7,380	5,195
Eibergen	22	2.00	22	8.49	22	16.15	22	18.50	Dutch	Furnes Shipping Agency	385.0	52.0	23.6	Portland	Brake	Wheat	7,260	5,354	3,839
Balboa	22	3.25	22	13.42	22	20.38			American	Colombian Maritime Co.	190.0	29.1	15.0	Buenaventura	Cristobal	Coffee, hides, etc.	568	741	350

[10] Cruiser. [11] For orders. [12] Nitrate of soda, copper, and general. [13] Old rope, 5,155 pounds; manganese ore, 589 tons.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
January 17	Heredia	United Fruit Co.	New Orleans.	January 16	Caribbean	Panama Railroad Cattle Industry	Cartagena.
January 17	Bodia	Socuska Loyd	Colorado.	January 16	L. J. Drake	Standard Oil Co.	Tampico.
January 17	Montevideo	Spanish Line	Habana.	January 18	Antillian	Leyland Line	New Orleans.
January 19	Metapan	United Fruit Co.	New Orleans and way-ports.	January 19	Montevideo	Spanish Line	Puerto Colombia.
January 19	Sixaola	United Fruit Co.	New York via Kingston.	January 19	Beaver	United States Navy	High seas.
January 20	Tivives	United Fruit Co.	Cartagena.	January 19	Metapan	United Fruit Co.	New Orleans.
January 20	Cristobal	Panama Railroad Steamship Line	Norfolk.	January 20	Colon	Panama Railroad Steamship Line	New York.
January 20	Caribbean	Panama Railroad Cattle Industry	Cartagena.	January 20	Teviot	Royal Mail Steam Packet Co.	Pensacola.
January 20	Oranje Nassau	Royal Netherlands W. I. Mail	Amsterdam and wayports	January 20	Tivives	United Fruit Co.	New York via Kingston.
January 21	Pastores	United Fruit Co.	New York via way ports.	January 20	Sixaola	United Fruit Co.	New York, Colombia, and Kingston.

* Other than ships passing through the Canal.

January 21...	Jeanne d'Arc	French Government	Cartagena.
January 22...	Somme [14]	United States Army	New York via San Juan.
January 22...	San Blas	United Fruit Co.	Port Limon.
January 22...	Coronado	Elders & Fyffes	Port Limon.
...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...

January 20...	Heredia	United Fruit Co.	New Orleans via Bocas del Toro and Habana.
January 21...	Gen. Geo. W. Goethals	Panama Railroad Steamship Line	New York via Haiti.
January 21...	Oranje Nassau	Royal Netherlands W. I. Mail	Amsterdam and wayports.
January 22...	Bodia	Socuska Loyd	Colorado Bar, Nicaragua.
January 22...	Coronado	Elders & Fyffes	Kingston.
January 22...	San Blas	United Fruit Co.	Boston.

[14] Transport.

PORT OF BALBOA.

January 16...	Orion [5]	United States Government	San Francisco.
January 15...	Glacier [1]	United States Government	San Pedro.
January 15...	Ontario [2]	United States Government	San Diego.
January 16...	Sonoma [2]	United States Government	San Diego.
January 16...	Mercy [15]	United States Government	San Pedro.
January 16...	Aroostook [16]	United States Government	San Diego.
January 17...	Mississippi [17]	United States Navy	San Pedro.
January 17...	Idaho [17]	United States Navy	San Pedro.
January 17...	Wyoming [17]	United States Navy	San Francisco.
January 17...	Arkansas [17]	United States Navy	San Francisco.
January 17...	New Mexico [17]	United States Navy	San Pedro.
January 17...	Texas [17]	United States Navy	San Francisco.
January 17...	New York [17]	United States Navy	San Francisco.
January 17...	Birmingham [18]	United States Navy	San Diego.
January 17...	Waters [3]	United States Navy	San Diego.
January 17...	Dent [3]	United States Navy	San Diego.
January 17...	Kennedy [3]	United States Navy	San Diego.
January 17...	Paul Hamilton [3]	United States Navy	San Diego.
January 17...	Parrott [3]	United States Navy	San Diego.
January 17...	Thompson [3]	United States Navy	San Diego.
January 17...	Simpson [3]	United States Navy	San Diego.
January 17...	Reno [3]	United States Navy	San Diego.
January 17...	Dorsey [3]	United States Navy	San Diego.
January 17...	Bulmer [3]	United States Navy	San Diego.
January 17...	Farquhar [3]	United States Navy	San Diego.
January 17...	Stoddert [3]	United States Navy	San Diego.
January 17...	Woolsey [3]	United States Navy	San Diego.
January 17...	Wickes [3]	United States Navy	San Diego.
January 17...	Evans [3]	United States Navy	San Diego.
January 17...	Aaron Ward [3]	United States Navy	San Diego.
January 17...	Phillips [3]	United States Navy	San Diego.
January 17...	Buchanan [3]	United States Navy	San Diego.
January 17...	Melville [19]	United States Navy	San Diego.
January 17...	Cuyama [20]	United States Navy	San Diego.
January 17...	Kanawha [7]	United States Navy	San Diego.
January 18...	Neptune [21]	United States Navy	San Francisco.
January 20...	Partridge [22]	United States Navy	San Diego.

January 17...	Submarine S-7	United States Navy	San Diego.
January 22...	Orion [5]	United States Navy	Valparaiso.
January 22...	Mercy [15]	United States Navy	Valparaiso.
January 22...	Mississippi [17]	United States Navy	Valparaiso.
January 22...	Idaho [17]	United States Navy	Valparaiso.
January 22...	Wyoming [17]	United States Navy	Valparaiso.
January 22...	Arkansas [17]	United States Navy	Valparaiso.
January 22...	New Mexico [17]	United States Navy	Valparaiso.
January 22...	Texas [17]	United States Navy	Valparaiso.
January 22...	New York [17]	United States Navy	Valparaiso.
January 22...	Birmingham [18]	United States Navy	Valparaiso.
January 22...	Waters [3]	United States Navy	Valparaiso.
January 22...	Dent [3]	United States Navy	Valparaiso.
January 22...	Kennedy [3]	United States Navy	Valparaiso.
January 22...	Paul Hamilton [3]	United States Navy	Valparaiso.
January 22...	Parrott [3]	United States Navy	Valparaiso.
January 22...	Thompson [3]	United States Navy	Valparaiso.
January 22...	Simpson [3]	United States Navy	Valparaiso.
January 22...	Reno [3]	United States Navy	Valparaiso.
January 22...	Dorsey [3]	United States Navy	Valparaiso.
January 22...	Bulmer [3]	United States Navy	Valparaiso.
January 22...	Farquhar [3]	United States Navy	Valparaiso.
January 22...	Stoddert [3]	United States Navy	Valparaiso.
January 22...	Woolsey [3]	United States Navy	Valparaiso.
January 22...	Wickes [3]	United States Navy	Valparaiso.
January 22...	Evans [3]	United States Navy	Valparaiso.
January 22...	Aaron Ward [3]	United States Navy	Valparaiso.
January 22...	Phillips [3]	United States Navy	Valparaiso.
January 22...	Buchanan [3]	United States Navy	Valparaiso.
January 22...	Kanawha [1]	United States Navy	Valparaiso.
January 22...	Neptune [21]	United States Navy	Valparaiso.
January 22...	Partridge [22]	United States Navy	Valparaiso.
...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...

[15] Hospital ship. [16] Plane tender. [17] Dreadnaught. [18] Third-class cruiser. [19] Tender. [20] Tanker. [21] Fuel ship. [22] Minesweeper.

February Weather Probabilities.

The following weather conditions may be expected to prevail at the Canal entrances during the month of February, 1921. Predictions are based on the weather records at Colon and Balboa Heights for the past 13 and 15 years, respectively:

Winds—Fresh northerly dry season winds will prevail throughout the month. The average hourly velocity on the Atlantic Coast will be about 16 miles, north and northeast winds prevailing. The maximum velocity is not likely to exceed 35 miles an hour, although a maximum velocity of 39 miles an hour was recorded during the "norther" of February, 1915.

North and northwest winds will prevail on the Pacific Coast and over the interior, with an average velocity of 10 or 12 miles per hour. The maximum velocity is not likely to exceed 32 miles per hour.

Rain—Dry season weather may be expected to prevail in February, but occasional light showers may be expected. The average February rainfall at the Pacific entrance is 0.77 inch, and the average on the Atlantic side is 1.62 inches.

Fogs—No fogs are likely to occur during the month at either Canal entrance, but occasional night and early morning fogs may be expected over the interior. The average number of nights in February with fogs over the Gaillard Cut section of the Canal has been 5. Practically all of these are light, and clear away before 8.30 a. m.

Temperature—Air temperatures should average about 80° F. on both coasts. The temperature at the Pacific entrance is not likely to exceed 94° F. or to fall below 65° F., while at the Atlantic entrance the maximum temperatures should not be above 90° F., or the minimum below 70° F. The average daily range in temperatures is about 18° F. on the Pacific Coast and but 7° F. on the Atlantic side.

Barometric pressure—The sea level atmospheric pressure averages slightly higher in the dry season. The average pressure should be about 29.90 inches in February. The maximum for the month is not likely to exceed 30.05 inches, nor the minimum to be lower than 29.70 inches.

Relative humidity—The relative humidity of the atmosphere is lower in the dry season. The humidity should average 80 per cent or under on both coasts, but the daily range will be greater on the Pacific side where the nighttime humidity is higher and the daytime humidity much lower than on the Atlantic Coast.

Storms—No severe general storms are likely to occur at either Canal entrance during the month, unless the Isthmus should be visited by storms of the "norther" type, which occasionally reach as far south as Colon at this season of the year.

No local thunderstorms are likely to occur and generally fair weather may be expected at both Canal entrances. Smooth to moderate seas may be expected at the Pacific entrance.

Tides—Tidal fluctuations on the Atlantic side are too small to affect navigation. Panama (Balboa) tide predictions for the month are given below:

Day of— W.	Day of— Mo.	Time and Height of High and Low Water.				Day of— W.	Day of— Mo.	Time and Height of High and Low Water.				Day of— W.	Day of— Mo.	Time and Height of High and Low Water.			
Tu	1	4:28	10:29	4:45	10:57	F	11	5:52	12.08	6.14	.....	M	21	2:22	8:53	2:55	9:21
		2.4	12.1	3.3	12.5			14.0	0.4	14.6	.....			15.0	-0.5	15:4	-0.4
W	2	5:27	11:38	5:46	.....	S	12	0:27	6:27	12:43	6:48	Tu	22	3:18	9:44	3:47	10:10
		2.9	11.6	3.8	.....			0.7	13.9	0.7	14.6			15.7	-1.4	16.1	-1.3
Th	3	0:03	6:29	12:44	6:49	S	13	1:05	7:02	1:22	7:25	W	23	4:11	10:31	4:39	10:56
		12.2	3.0	11.7	4.0			1.0	13.7	1.2	14.4			16.2	-2.0	16.6	-1.8
F	4	1:03	7:29	1:39	7:50	M	14	1:48	7:41	2:06	8:05	Th	24	5:01	11:16	5:28	11:41
		12.2	2.9	12.0	3.7			1.3	13.4	1.7	14.0			16.4	-2.1	16.7	-1.8
S	5	1:52	8:23	2:26	8:42	Tu	15	2:36	8:26	2:57	8:52	F	25	5:50	11:58	6:16	.....
		12.5	2.4	12.5	3.1			1.7	12.9	2.2	13.6			16.2	-1.8	16.5	.....
S	6	2:37	9:09	3:09	9:26	W	16	3:33	9:22	3:57	9:50	S	26	0:26	6:37	12:43	7:01
		12.9	1.8	13.0	2.4			2.0	12.5	2.8	13.1			-1.4	15.7	-0.9	15.9
M	7	3:19	9:49	3:50	10:05	Th	17	4:34	10:30	5:01	11:03	S	27	1:12	7:23	1:29	7:44
		13.2	1.2	13.5	1.7			2.1	12.2	2.8	13.0			-0.6	14.9	0.2	15.0
Tu	8	3:59	10:25	4:27	10:41	F	18	5:40	11:48	6:12	.....	M	28	2:01	8:08	2:19	8:28
		13.5	0.7	14.0	1.2			2.0	12.5	2.5	.....			0.5	13.8	1.4	13.8
W	9	4:28	10:59	5:04	11:16	S	19	0:19	6:49	12:58	7:22						
		13.8	0.4	14.3	0.8			13.4	1.4	13.4	1.8						
Th	10	5:16	11:33	5:40	11:51	S	20	1:24	7:55	1:58	8:25						
		14.0	0.3	14.6	0.7			14.2	0.5	14.4	0.7						

The tides are placed in the order of their occurrence; the *times* of high and low tides are shown on the upper lines. The figures in boldfaced type are hours and elevations between noon and midnight; *ante meridian* figures are given in the ordinary lightfaced type. The time is Cosmopolitan Standard for the meridian 75° W.

The *elevations* of the water are shown on the second line for each day; a comparison of consecutive heights will indicate whether it is high or low water. Heights are reckoned from mean low water springs, which is 8.3 below mean sea level and is the datum of soundings on the Coast and Geodetic Survey charts for this region. The depth of water may accordingly be estimated by adding the tabular height of the tide to the soundings, unless a minus (–) sign is before the height, in which case it is to be subtracted. The annual inequality or variation in the mean sea level is included in the predictions.

Accessions to the Canal Library.

The following are among the books that have been added to the Panama Canal Library recently:

Bailey, C. S., "For the children's hour;" Castle, W. R., "Hawaii past and present;" Chandler, Anna Curtis, "Magic pictures of the long ago;" Clark, Champ, "My quarter century of American politics;" Clark, Francis Edward, "The charm of Scandinavia;" Clemens, Samuel Langhorne, "The innocents abroad;" Conrad, Joseph, "Chance;" Conrad, Joseph, "Lord Jim;" Collingwood, S. D., "Life and letters of Lewis Carroll;" Conrad, Joseph, "Romance;" Conrad, Joseph, "Victory;" Davis, Richard Harding, "Gallegher, and other stories;" Davis, Richard Harding, "Soldiers of fortune;" Franck, Harry Alverson, "Vagabonding down the Andes;" Guiterman, Arthur, "The laughing muse;" Haggard, Sir H. R., "The people of the mist;" Kellogg, C. H., "Mercier, the fighting Cardinal of Belgium;" Keynes, John Maynard, "The economic consequences of the peace;" Levine, V., "Colombia;" London, Jack, "On the Makaloa mat;" Malins, Geoffrey H., "How I filmed the war;" Marzials, Sir Frank Thomas, "Life of Victor Hugo;" Morgan, George, "The true La Fayette;" Muir, John, "Boyhood of a naturalist;" Parke, J. C., "How to play lawn tennis;" Porter, Eleanor Hodgman, "Mary Marie;" Post, Mrs. Emily (Price), "By motor to the Golden Gate;" Recouly, Raymond, "Foch, the winner of the war;" Scott, Ernest, "A short history of Australia;" Street, Julian Leonard, "American adventures;" Underwood, Mrs. E. (W.), "Short stories from the Balkans;" Van Dyke, John Charles, "The Grand Canyon of the Colorado;" Vallery-Radot, Rene, "Life of Pasteur;" Verrill, A. H., "The book of the West Indies;" Webb, Frank, "Switzerland of the Swiss;" Wheeler, B. I., "Alexander the Great;" White, W. A., "Court of Boyville;" Wister, Owen, "Ulysses S. Grant;" Woodberry, G. E., "Ralph Waldo Emerson."

Magazines and Newspapers in the Library.

The following magazines, received in The Panama Canal Library can be loaned for a period of 4 days:

Arts and Decoration.
Atlantic Monthly.
Dial.
Good Housekeeping.
Ladies Home Journal.
Literary Digest.
National Geographic Magazine.
North American Review.
The Outlook.
Red Book.
Scientific American.
Scientific American Monthly.
Scribner's Magazine.
Travel.
Yale Review.

The following newspapers are available in the library:

Boston Globe.
Chicago Tribune.
New York Times.
San Francisco Chronicle.
Washington Evening Star.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z. (telephone 286):

Expert aid (optical), $10 per diem (male and female); form 2118; announcement No. 61; age, below 45 years; vacancies exist in the Naval Gun Factory, Washington, D. C.; February 15, 1921.[1]

Laundress, $400 to $600 per year (female); form 1800; announcement No. 29; age, 20 but not 50 years; vacancies exist in the Indian Service.[2]

Magnetic observer, $1,500 a year (male and female); form 1312; announcement No. 56; age, 20 but not 45 years; vacancies exist in the Coast and Geodetic Survey; May 3, 1921.[1]

Metallurgist, $3,000 to $3,600 a year; assistant metallurgist, $2,000 to $3,000 a year (male and female); form 2118; announcement No. 63; age, below 45 years; vacancies exist in Ordnance Department at Large; April 5, 1921.[1]

Mining and metallurgical engineer, $4,000 to $5,000 a year (male and female); form 2118; announcement No. 62; age, below 55 years; vacancies exist in Bureau of Mines, Washington, D. C.; February 15, 1921.[1]

Typewriter repairman, $1,400 a year (male and female); form 1800; announcement No. 63; age, 18 but not 50 years; vacancies exist in office of Chief Clerk, Washington, D. C.; February 15, 1921.[1]

[1] Nonassembled. Date given for nonassembled examination is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

[2] Nonassembled. Applications will be received at any time until further notice.

Deceased and Insane Employees.

The estates of the following deceased or insane employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

DECEASED.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Melvina Loague	33014	Jamaica	Panama	Supply Department	Jan. 12, 1921.
Antonio Pierre	23079	Guadeloupe	Folks River	Panama Railroad	Jan. 8, 1921.
James H. A. Levien *alias* James Levine	36761	Barbados	Panama	Dredging Division	Jan. 10, 1921.

INSANE.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of commitment.
Forrest Lambert	2482	United States	Balboa	Mechanical Division	Jan. 10, 1921.
Isiah Austin	25898	Barbados	Colon	Panama Railroad	Dec. 14, 1920.
Ernest Castan	40066	Panama	Panama	The Panama Canal	Dec. 20, 1920.

Schedule of Official Jitney Service.

Following is the schedule of the official jitney plying between Balboa shops and the Ancon police station, carrying employees in the conduct of official business, upon presentation of passes issued by the Chief Quartermaster or of the "special pass" issued by the Governor:

FROM ANCON POLICE STATION TO BALBOA SHOPS.

Police Station	Leave on the hour and half hour.
Administration Building	Leave 7 minutes and 37 minutes after the hour.
Balboa Commissary	Leave 10 minutes and 40 minutes after the hour.
Balboa shops	Arrive 15 minutes and 45 minutes after the hour.

FROM BALBOA SHOPS TO ANCON POLICE STATION.

Balboa shops	Leave 15 minutes and 45 minutes after the hour.
Port Captain's Office	Leave 18 minutes and 45 minutes after the hour.
Balboa Commissary	Leave 20 minutes and 50 minutes after the hour.
Administration Building	Leave 25 minutes and 55 minutes after the hour.
Ancon Police Station	Arrive on the hour and half hour.

Sale of Dynamite.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., February 28, 1921, and then opened, for the purchase of about 810 cases of dynamite removed from the steamship *Cartagena*, now stored in the Gamboa magazine.

Form of proposal may be had upon application to the office of the Chief Quartermaster, or the General Storekeeper, Balboa. The Panama Canal reserves the right to reject any or all bids.

Sale of Four Boilers.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., February 7, 1921, and then opened, for the purchase of four boilers removed from the steamship *Cristobal*, located near Dock No. 13, Balboa. Form of proposal may be had upon application to the office of the Chief Quartermaster. The Panama Canal reserves the right to reject or accept any or all bids.

Sale of "Stonetex" Paint.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, up to 10.30 a. m., January 31, and then opened, for the purchase of approximately 774 gallons of dark brick red "Stonetex" paint in 5-gallon containers located at Section A, Balboa storehouse. Form of proposal may be had upon application to the office of the Chief Quartermaster. The Panama Canal reserves the right to reject any or all bids.

COMMISSARY NOTES.

Sporting Goods.

Among the sporting goods just arrived in the line stores are fishing tackle and baseball supplies.

Books.

Books received:

"Hearts of Three," by Jack London; "Romantic," by May Sinclair; "Homespun and Gold," by Alice Brown; "Universal Pocket Dictionary;" "Mrs. Farmer's Cook Book."

Directory of The Panama Canal.

Executive Department.

Headquarters, Balboa Heights.

BRIG. GEN. CHESTER HARDING, U. S. A. (Retired), Governor.
M. B. Stevens, Secretary.
C. A. MCILVAINE, Executive Secretary.
JOHN H. SMITH, Chief Clerk, Executive Office.
GUY JOHANNES, Chief, Police and Fire Division.
CREDE H. CALHOUN, Chief, Division of Civil Affairs.
A. R. LANG, Superintendent, Division of Schools.
T. S. BOOZ, General Secretary, Bureau of Clubs and Playgrounds.
ALBERT C. HINDMAN, District Attorney, Ancon.
WALTER F. VAN DAME, Counsel, P. R. R., and Land Agent, Panama Canal, Ancon.

Department of Operation and Maintenance.

(Under immediate direction of the Governor as head of the department.)
Headquarters, Balboa Heights.

COL. J. J. MORROW, U. S. A., Engineer of Maintenance.
W. L. HERSH, Electrical Engineer, Electrical Division.
W. R. HOLLOWAY, Superintendent, Pacific Locks, Pedro Miguel.
E. D. STILLWELL, Superintendent, Gatun Locks, Gatun.
J. J. WALSH, General Foreman, Gatun Dam, Gatun.
C. J. EMBREE, Office Engineer.
O. E. MALSBURY, Assistant Engineer, Section of Surveys.
R. Z. KIRKPATRICK, Chief Hydrographer, Section of Meteorology and Hydrography.
D. E. WRIGHT, Municipal Engineer, Division of Municipal Engineering.
JOEL M. PRATT, Superintendent, Dredging Division, Paraiso.
JOHN G. CLAYBOURN, Assistant Engineer, Dredging Division, Paraiso.
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Balboa Heights.

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W. C. Hushing, representing employees.

Board on Complaints Concerning Working Conditions:
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W. C. Hushing, and Harvey McConaughey, representing employees.

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Panama Railroad Company.

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CANAL WORK IN DECEMBER.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of December, 1920:

BALBOA HEIGHTS, C. Z., January 28, 1921.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of The Panama Canal for the month of December, 1920:

CANAL TRAFFIC.

The number of ocean-going ships passing through the Canal during the month was 286, of which 265 were commercial vessels, and 21 United States Government vessels. A detailed classification of both government and commercial vessels will be found under the tables included in this report.

A comparison of this month's commercial traffic with that of the preceding month, of the corresponding month of 1919, and of the average month's traffic for the calendar year 1920, shows the following:

Panama Canal net tonnage:	
December, 1920	1,027,918
November, 1920	929,875
December, 1919	927,726
Average month, calendar year 1920	864,855
Registered gross tonnage:	
December, 1920	1,298,864
November, 1920	1,184,072
December, 1919	1,203,316
Average month, calendar year, 1920	1,108,407
Registered net tonnage:	
December, 1920	823,758
November, 1920	756,223
December, 1919	759,699
Average month, calendar year 1920	704,867
Tolls earned:	
December, 1920	$1,007,849.32
November, 1920	933,912.11
December, 1919	891,358.34
Average month, calendar year 1920	857,946.85
Tons of cargo carried:	
December, 1920	1,076,539
November, 1920	984,910
December, 1919	924,479
Average month, calendar year 1920	936,343

The total number of vessels and craft of all kinds through the Canal was 292, as compared with 258 for last month. Ocean-going commercial ships passing through the Canal averaged 8.5 per day. The average tonnage, tolls, etc., per commercial vessel, as compared with last month's traffic, were as follows:

Average per vessel.	This month.	Last month.
United States equivalent net tonnage	3,141	3,218
Panama Canal net tonnage	3,879	3,907
Registered gross tonnage	4,901	4,975
Registered net tonnage	3,108	3,177
Tolls	$3,803.20	$3,924.00
Tons of cargo (2,240 pounds)	4,062	4,804

The United States coastwise trade for December included 22 vessels with a total Panama Canal net tonnage of 90,105, and cargo of 89,015 tons. There were 12 vessels from the Atlantic to the Pacific with a total tonnage of 46,773, and cargo of 53,802 tons; and 10 vessels from the Pacific to the Atlantic, with a total tonnage of 43,332, and cargo of 35,213 tons.

PRINCIPAL COMMODITIES.

Bulk shipments of the various commodities included in the December traffic were:

FROM ATLANTIC TO PACIFIC.

Commodity.	From—	To—	Tons.
Coal and coke	North Atlantic ports, U. S.	Chile	39,637
Coal and coke	South Atlantic ports, U. S.	Chile	100,183
Coal and coke	South Atlantic ports, U. S.	Balboa, C. Z.	9,372
Coal and coke	South Atlantic ports, U. S.	New Zealand	9,255
Coal and coke	South Atlantic ports, U. S.	Peru	6,435
Coal and coke	South Atlantic ports, U. S.	San Francisco	2,074
Total, coal and coke			166,956
Fuel oil	East coast of Mexico	Chile	53,058
Fuel oil	East coast of Mexico	Balboa, C. Z.	15,000
Fuel oil	East coast of Mexico	Peru	9,405
Fuel oil	East coast of Mexico	San Francisco	8,000
Total, fuel oil			85,463
Iron and steel	North Atlantic ports, U. S.	West coast, U. S.	19,818
Iron and steel	North Atlantic ports, U. S.	Far East	17,518
Iron and steel	North Atlantic ports, U. S.	West coast, South America	10,157
Iron and steel	North Atlantic ports, U. S.	Australasia	6,250
Iron and steel	North Atlantic ports, U. S.	Philippines	2,000
Iron and steel	Gulf ports, U. S.	Far East	15,735
Iron and steel	Gulf ports, U. S.	West coast, South America	890
Iron and steel	Cristobal	West coast, South America	400
Iron and steel	British Isles	West coast, South America	3,655
Iron and steel	British Isles	New Zealand	1,050
Total, iron and steel			77,473
Refined oils	North Atlantic ports, U. S.	Far East	19,617
Refined oils	North Atlantic ports, U. S.	Philippines	7,156
Refined oils	North Atlantic ports, U. S.	Chile	5,662
Refined oils	North Atlantic ports, U. S.	Australasia	3,854
Refined oils	North Atlantic ports, U. S.	West coast, U. S.	402
Refined oils	Gulf ports, U. S.	Far East	10,900
Total, refined oils			47,591
Tobacco	North Atlantic ports, U. S.	Far East	1,235
Tobacco	North Atlantic ports, U. S.	Colombia	605
Total, tobacco			1,840
Cement	New York	West coast, South America	2,806
Cement	London	West coast, South America	1,950
Total, cement			4,756
Glass	British Isles	West coast, South America	415
Glass	Belgium	West coast, U. S.	103
Total, glass			518
Silver sand	Belgium	California	7,517
Sulphur	Gulf ports, U. S.	California	5,000
Sulphur	Gulf ports, U. S.	Borneo	1,200
Total, sulphur			6,200
Cotton	Gulf ports, U. S.	Far East	5,983
Tin (metal)	Atlantic ports, U. S.	Far East	3,000
Pitch	Gulf ports, U. S.	China	2,700
Aeroplanes	New York	Philippines	2,249
Sugar	Baltimore	Japan	2,000
Saltpeter	Norway	San Pedro	800
Salt	Puerto Colombia	Buenaventura	524
Benzine	New York	Australasia	520

FROM PACIFIC TO ATLANTIC.

Nitrate	Chile	South Atlantic ports, U. S.	64,117
Nitrate	Chile	Gulf ports, U. S.	14,711
Nitrate	Chile	North Atlantic ports, U. S.	5,950
Total to United States			84,778

FROM PACIFIC TO ATLANTIC—continued.

Commodity.	From—	To—	Tons.
Nitrate	Chile	Belgium	18,211
Nitrate	Chile	British Isles	10,559
Nitrate	Chile	Denmark	8,727
Nitrate	Chile	France	13,234
Nitrate	Chile	Germany	5,055
Nitrate	Chile	Spain	9,326
Nitrate	Chile	Sweden	5,700
Nitrate	Chile	Europe [1]	2,006
Total to Europe			72,818
Nitrate	Chile	Azores [2]	19,348
Nitrate	Chile	West Indies	10,689
Grand total, nitrate			187,633
Wheat	West coast, U. S.	British Isles	27,288
Wheat	West coast, U. S.	Belgium	15,736
Wheat	West coast, U. S.	Portugal	6,500
Wheat	West coast, U. S.	Germany	5,863
Total, wheat			55,387
Lumber	West coast, U. S.	British Isles	22,206
Lumber	West coast, U. S.	East coast, U. S.	10,370
Lumber	Central America	Cristobal	159
Total, lumber			32,735
Cold storage and food products	Australasia	British Isles	28,889
Cold storage and food products	Australasia	East coast, U. S.	5,643
Total, cold storage and food products			34,532
Sugar	Peru	North Atlantic ports, U. S.	4,186
Sugar	Peru	British Isles	9,996
Sugar	Java	North Atlantic ports, U. S.	5,394
Total, sugar			19,576
Copper	Chile	North Atlantic ports, U. S.	13,107
Copper	Chile	British Isles	1,000
Copper	Peru	Cristobal	1,122
Copper	Australia	British Isles	993
Total, copper			16,222
Barley	West coast, U. S.	British Isles	10,644
Barley	Chile	British Isles	755
Total, barley			11,399
Canned fruits	West coast, U. S.	Cuba	1,600
Canned fruits	West coast, U. S.	British Isles	675
Canned fruits	West coast, U. S.	Gulf ports, U. S.	432
Total, canned fruits			2,707
Ivory nuts	Ecuador	North Atlantic ports, U. S.	1,277
Ivory nuts	Ecuador	Cristobal	286
Ivory nuts	Ecuador	Europe	132
Total, ivory nuts			1,695
Coffee	Guatemala	Cristobal	846
Coffee	Colombia	New York	262
Total, coffee			1,108
Refined oils	San Francisco	London	11,000
Canned fish	Vancouver	London	3,972
Oats	New Zealand	British Isles	1,863
Ore, vanadium	Callao	New York	1,300
Coconut oil	Philippines	New York	663
Rice	China	Cuba	800

[1] Not designated. [2] For orders.

LATIN-AMERICAN TRAFFIC.

Commercial vessels, southbound, engaged in Latin-American trade, for December, were classified as follows:

Nationality.	No. of ships.	U. S. equivalent net tonnage.	Panama Canal net tonnage.	Registered gross tonnage.	Registered net tonnage.	Tons of cargo.
British	32	[1] 71,912	[1] 90,635	[1] 119,678	[1] 72,746	79,433
United States	28	83,666	96,942	125,059	81,525	132,144
Norwegian	7	21,500	25,769	33,854	21,249	46,015
Spanish	5	10,405	12,674	16,326	10,416	17,440
Chilean	5	9,488	13,909	18,389	10,556	3,298
Peruvian	4	5,493	9,844	14,532	7,783	4,606
Japanese	3	10,748	12,102	15,699	10,372	19,676
Dutch	2	5,268	6,780	6,898	4,280	6,200
Danish	2	4,604	5,271	6,423	3,983	9,029
Italian	1	3,339	4,266	5,860	3,486	720
Costa Rican	1	144	152	158	93	18
Totals	90	226,567	278,344	362,876	226,489	318,579
Totals, November, 1920	65	.....	199,867	257,572	162,047	226,824
Totals, December, 1919	89	.....	261,546	345,230	213,639	105,634

[1] A British cruiser of 5,329 tons displacement is not included in tonnage figures.

Three of the above vessels, with an aggregate Panama Canal net tonnage of 7,691, were in ballast; 2 from the United States and 1 from Europe.

This traffic is further classified in the following table:

No. vessels.	Registry.	Commodity.	Tons of cargo.	Origin of cargo.
	To west coast of South America—			
8	United States	General merchandise.	21,467	East coast of United States.
6	United States	Coal and coke	37,153	East coast of United States.
7	British	Coal and coke	37,087	East coast of United States.
3	British	General merchandise.	5,981	East coast of United States.
1	British	Ballast	.....	East coast of United States.
3	Norwegian	Coal and coke	16,691	East coast of United States.
1	Norwegian	General and coal	4,449	East coast of United States.
4	Spanish	Coal and coke	17,440	East coast of United States.
3	Japanese	Coal and coke	19,676	East coast of United States.
2	Danish	Coal and coke	9,029	East coast of United States.
1	Chilean	General merchandise.	2,300	East coast of United States.
1	Chilean	Ballast	.....	East coast of United States.
40	.....	.....	171,273	East coast of United States.
9	British	General merchandise.	4,441	Cristobal, C. Z.
4	Peruvian	General merchandise.	4,606	Cristobal, C. Z.
3	Chilean	General merchandise.	998	Cristobal, C. Z.
1	United States	General merchandise.	111	Cristobal, C. Z.
17	.....	.....	10,156	Cristobal, C. Z.
5	British	General merchandise.	15,960	British Isles.
2	Dutch	General merchandise.	6,200	Holland.
1	Norwegian	General merchandise.	6,075	Norway.
1	Italian	General merchandise.	720	Italy.
1	Spanish	Ballast	.....	Spain.
10	.....	.....	28,955	Europe.
4	United States	Crude oil	34,163	East coast of Mexico.
2	Norwegian	Crude oil	18,800	East coast of Mexico.
1	British	Crude oil	9,500	East coast of Mexico.
1	British	Gasolene, kerosene	3,420	East coast of Mexico.
8	.....	.....	65,883	East coast of Mexico.
1	British	General merchandise.	747	North Colombian ports.
	To Balboa, Canal Zone—			
2	United States	Fuel oil	15,000	East coast of Mexico.
2	United States	Coal	9,372	East coast of United States.
1	British	Ballast	.....	Limon, Costa Rica.
5	.....	.....	24,372	
	To west coast of United States—			
2	United States	General merchandise.	2,864	Cristobal, C. Z.
1	United States	Crude oil	8,000	West coast of Mexico.
3	.....	.....	10,864	

No. vessels	Registry.	Commodity.	Tons of cargo.	Origin of cargo.
	To west coast of Central America—			
3	British	General merchandise.	2,297	Cristobal, C. Z.
1	United States	Coal	3,124	East coast of United States.
1	United States	Steel rails	890	East coast of United States.
1	Costa Rica	General merchandise.	18	Cristobal, C. Z.
6			6,329	
90	Total Latin-American traffic, Atlantic to Pacific		318,579	

The Latin-American traffic, northbound, through the Canal, for December, is classified in the following tabulation:

Nationality.	No. of ships.	U. S. equivalent net tonnage.	Panama Canal net tonnage.	Registered gross tonnage.	Registered net tonnage.	Tons of cargo.
British	29	71,987	92,643	119,605	72,221	82,980
United States	32	96,486	114,414	150,171	96,418	89,828
Norwegian	4	12,963	16,013	20,572	12,931	9,696
Peruvian	3	4,010	8,315	12,666	6,614	4,235
French	2	7,238	8,316	11,561	7,370	12,958
German	2	5,872	8,917	9,245	5,861	10,689
Dutch	2	4,970	8,200	7,991	4,955	12,016
Danish	2	4,865	4,841	5,937	3,597	8,914
Spanish	2	4,018	4,702	6,530	4,005	8,631
Chilean	2	3,608	6,250	7,612	4,560	478
Japanese	1	3,859	4,440	6,079	3,850	8,024
Belgian	1	3,151	4,043	5,072	3,094	7,000
Swedish	1	3,123	4,013	4,952	3,973	5,700
Chinese	1	1,678	1,733	2,631	1,673	800
Costa Rican	1	144	152	158	93	356
Totals	85	227,972	286,992	370,782	231,215	262,305
Totals, November, 1920	67		230,526	305,163	191,159	207,888
Totals, December, 1919	62		203,707	267,960	167,854	263,372

Seventeen of the above ships were in ballast; 13 of which were empty tankers returning to Mexican ports. Of the remaining 4, 2 were British tugs, and 1 a British ship from the west coast of South America to Cristobal, and the other a vessel in ballast from Balboa, C. Z., to New York.

This traffic is further classified in the following tabulation:

No. vessels	Registry.	Commodity.	Tons of cargo.	Destined to—
	From west coast of South America—			
10	United States	Nitrate	58,697	East coast of United States.
5	United States	General merchandise.	15,358	East coast of United States.
1	United States	Copper and general	4,001	East coast of United States.
1	United States	Sugar	3,900	East coast of United States.
1	United States	Nitrate, general	2,950	East coast of United States.
1	United States	Cacao	2,180	East coast of United States.
2	British	Nitrate	15,844	East coast of United States.
2	British	General merchandise.	2,023	East coast of United States.
1	British	Copper	3,046	East coast of United States.
1	Norwegian	Nitrate	6,500	East coast of United States.
1	Norwegian	General merchandise.	3,196	East coast of United States.
26			117,695	East coast of United States.
7	British	General	7,847	Cristobal, C. Z.
3	British	Ballast		Cristobal, C. Z.
3	Peruvian	General merchandise.	4,235	Cristobal, C. Z.
2	Chilean	General merchandise.	478	Cristobal, C. Z.
1	German	Nitrate	5,315	Cristobal, C. Z.[1]
1	United States	General merchandise.	492	Cristobal, C. Z.
17			18,367	Cristobal, C. Z.
5	British	General merchandise.	27,300	British Isles.
1	British	Nitrate	7,550	British Isles.
2	British	Nitrate	10,927	France.
1	French	Nitrate, general	6,845	France.
1	Dutch	Nitrate	5,316	Spain.
1	Spanish	Nitrate	4,010	Spain.
2	Danish	Nitrate	8,914	Denmark.
1	British	Nitrate	7,500	Belgium.
1	Belgian	Nitrate	7,000	Holland.
1	French	Nitrate, general	6,113	Germany.
1	Swedish	Nitrate	5,700	Sweden.
17			97,175	European ports.

[1] For orders.

No. vessels	Registry.	Commodity.	Tons of cargo.	Destined to—
	From west coast of South America—Contd.			
3	United States	Ballast		East coast of Mexico.
2	Norwegian	Ballast		East coast of Mexico.
1	British	Ballast		East coast of Mexico.
6				East coast of Mexico.
1	Japanese	Nitrate	8,024	Azore Islands.[1]
1	Dutch	Nitrate	6,700	Azore Islands.[1]
1	Spanish	Nitrate	4,621	Azore Islands.[1]
3			19,345	Azore Islands.[1]
1	German	Nitrate	5,374	Kingston, Jamaica.
	From west coast of United States.—			
4	United States	Ballast		East coast of Mexico.
1	British	Ballast		East coast of Mexico.
1	United States	General	2,213	Habana, Cuba.
1	United States	General merchandise	37	Cristobal, C. Z.
7			2,250	
	From west coast of Central America—			
3	British	General merchandise	943	Cristobal, C. Z.
1	Costa Rican	Logs	356	Cristobal, C. Z.
4			1,299	Cristobal, C. Z.
	From Balboa, C. Z.—			
2	United States	Ballast		East coast of Mexico.
1	United States	Ballast		East coast of United States.
3				
	To West Indies—			
1	Chinese	Rice	800	Habana, Cuba.

[1] For orders.

Thirty-six of the vessels passing through the Canal during December were under control of the United States Shipping Board, combining a total Panama Canal net tonnage of 153,354, and cargo of 177,879 tons; tolls on these vessels aggregated $156,971.66. Of these, 16 were southbound, with a total Panama Canal net tonnage of 69,715, and cargo of 80,754 tons; 20 were northbound, with a combined Panama Canal net tonnage of 83,639, and cargo of 97,124 tons. In addition to the foregoing, 4 vessels under control of the Shipping Board, with a combined Panama Canal net tonnage of 14,938,[1] and carrying 30,995 tons of fuel for the Navy, passed through the Canal southbound during the month.

[1] Panama Canal net tonnage not available on one of the four vessels.

Statements attached to this report show the origin and destination of all cargo passing through the Canal during December (*see* pages 364 and 365); the following tabulation gives the classification of the traffic over the principal trade routes:

	Total vessels.			Vessels in ballast.	
	Vessels.	Panama Canal net tonnage.	Cargo.	Vessels.	Panama Canal net tonnage.
Atlantic to Pacific.					
East coast of South America to west coast of South America	40	135,206	171,273	2	5,477
East coast of United States to Far East	17	84,873	120,887		
Cristobal to west coast of South America	17	29,078	10,156		
United States coastwise	12	46,773	53,802		
Europe to west coast of South America	10	44,391	28,955	1	2,214
Europe to west coast of United States	8	35,958	12,658	4	16,539
Mexico to west coast of South America	8	38,795	65,883		
Europe to Australasia	6	43,491	29,226		
East coast of United States to Australasia	6	36,775	47,391		
Cristobal to west coast of Central America	4	3,263	2,315		
East coast of United States to Philippines	3	14,721	22,414		
East coast of Mexico to Balboa, C. Z	2	8,799	15,000		
East coast of United States to Balboa	2	6,643	9,372		
Cristobal to west coast of United States	2	3,756	2,864		
East coast of United States to west coast of Central America	2	2,231	4,014		
East coast of Mexico to west coast of United States	1	5,476	8,000		
Europe to west coast of Canada	1	4,899	1,582		
East coast of United States to west coast of Canada	1	5,196	5,329		

	Total vessels.			Vessels in ballast.	
	Vessels.	Panama Canal net tonnage.	Cargo.	Vessels.	Panama Canal net tonnage.
Atlantic to Pacific—Continued.					
East coast of Canada to Australasia	1	3,902	7,583	.....	.....
East coast of Central America to Balboa	1	(1)	.....	1	.....
Colombian coastwise ports	1	706	747	.....	.....
Totals for December, 1920	145	554,932	619,451	8	24,230
Totals for November, 1920	123	467,951	491,109	15	44,499
Totals for December, 1919	140	487,114	405,697	51	163,565
Pacific to Atlantic.					
West coast of South America to east coast of United States	26	87,836	117,695	.....	.....
West coast of South America to Cristobal	17	28,673	18,367	3	303
West coast of South America to Europe	17	77,417	97,175	.....	.....
West coast of United States to Europe	14	69,626	97,955	.....	.....
United States coastwise	10	43,332	35,213	2	13,285
Australasia to Europe	6	43,260	32,208	.....	.....
West coast of South America to Mexico	6	32,479	.....	6	32,479
West coast of United States to Mexico	5	26,107	.....	5	26,107
West coast of Central America to Cristobal	4	3,263	1,299	.....	.....
West coast of South America to Azore Islands [2]	3	10,954	19,345	.....	.....
Australasia to east coast of United States	2	14,915	10,720	.....	.....
Far East to east coast of United States	2	9,413	11,280	.....	.....
Balboa to east coast of Mexico	2	8,799	.....	2	8,799
West coast of Canada to Europe	1	5,448	7,407	.....	.....
West coast of South America to West Indies	1	4,490	5,374	.....	.....
Far East to Cuba	1	1,733	800	.....	.....
West coast of United States to Cristobal	1	2,163	37	.....	.....
Balboa to East coast of United States	1	1,574	.....	1	1,574
West coast of United States to Cuba	1	1,504	2,213	.....	.....
Totals for December, 1920	120	472,986	457,088	19	82,547
Totals for November, 1920	115	461,924	493,801	16	63,287
Totals for December, 1919	120	440,612	518,782	12	61,887

[1] British cruiser of 5,329 tons displacement not included in Panama Canal net tonnage figures. [2] For orders.

SERVICES TO CANAL SHIPPING.

Miscellaneous repairs were made at Cristobal and Balboa shops and dry docks on 120 vessels and craft during December; 79 at Cristobal, and 41 at Balboa. Of these, 15 were dry-docked; 8 at Cristobal, and 7 at Balboa. Bunker coal in the amount of 42,675 tons, was supplied to 128 commercial vessels; 38,746 tons to 113 vessels at Cristobal; and 3,929 tons to 15 vessels at Balboa. Seven commercial vessels were supplied with a total of 19,649 barrels of fuel oil at Cristobal. Water, to the amount of 15,772,165 gallons, was supplied to 292 vessels, 12,173,665 gallons to 200 vessels at Cristobal, and 3,598,500 gallons to 92 vessels at Balboa. Sales of commissary supplies to commercial ships, other than those of the Panama Railroad Steamship Line, aggregated $77,701.07, including $4,791.91 for laundry service; these sales were made to 168 vessels at Cristobal in the amount of $52,837.22; and to 119 vessels at Balboa in the amount of $24,863.85. Receipts for tug and launch service totaled $34,144.15, of which $19,330.75 were earned at Cristobal, and $14,813.90 at Balboa. Fees for pilotage totaled $12,635, of which $9,221 was earned at Cristobal, and $3,414 at Balboa.

STATEMENT OF OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Canal are shown in the following tabulation:

Item.	Cristobal.	Balboa.	Total.
Commercial ships passing through the Canal	145	120	265
Net tonnage of above vessels, Panama Canal measurement	554,932	472,985	1,027,917
United States equivalent net tonnage of commercial vessels	449,204	383,203	832,407
Registered gross tonnage of commercial vessels	698,602	600,262	1,298,864
Registered net tonnage of commercial vessels	441,336	382,422	823,758
Cargo through the Canal in commercial vessels—tons of 2,240 pounds	619,451	457,088	1,076,539
Deck cargo included in above ..... tons	1,566	2,232	3,798

Item.	Cristobal.	Balboa.	Total.
Nationality of commercial vessels through the Canal:			
Belgian	.....	1	1
British	52	41	93
Chilean	5	2	7
Chinese	.....	1	1
Costa Rican	1	1	2
Danish	3	2	5
Dutch	3	2	5
French	.....	2	2
German	.....	2	2
Italian	1	.....	1
Japanese	10	3	13
Norwegian	8	4	12
Peruvian	4	3	7
Spanish	5	2	7
Swedish	1	1	2
United States	52	53	105
Totals for December, 1920	145	120	265
Totals for last month	123	115	238
Totals for December, 1919	140	120	260
United States equivalent net tonnage of commercial vessels by nationality:			
Belgian	.....	3,151	3,151
British	162,568	136,931	299,499
Chilean	9,488	3,608	13,096
Chinese	.....	1,678	1,678
Costa Rican	144	144	288
Danish	8,848	4,865	13,713
Dutch	8,281	4,970	13,251
French	.....	7,238	7,238
German	.....	5,872	5,872
Italian	3,339	.....	3,339
Japanese	39,467	12,445	51,912
Norwegian	24,553	12,963	37,516
Peruvian	5,493	4,010	9,503
Spanish	10,405	4,018	14,423
Swedish	4,122	3,123	7,245
United States	172,496	178,187	350,683
Totals for December, 1920	449,204	383,203	832,407
Totals for last month	387,397	378,420	765,817
Totals for December, 1919	402,874	358,533	761,407
Panama Canal net tonnage of commercial vessels by nationality:			
Belgian	.....	4,043	4,043
British	204,773	169,507	374,280
Chilean	13,909	6,250	20,159
Chinese	.....	1,733	1,733
Costa Rican	152	152	304
Danish	10,589	4,841	15,430
Dutch	10,636	8,200	18,836
French	.....	8,316	8,316
German	.....	8,917	8,917
Italian	4,266	.....	4,266
Japanese	45,561	13,853	59,414
Norwegian	29,655	16,013	45,668
Peruvian	9,844	8,315	18,159
Spanish	12,674	4,702	17,376
Swedish	5,226	4,013	9,239
United States	207,647	214,131	421,778
Totals for December, 1920	554,932	472,986	1,027,918
Totals for last month	467,951	461,924	929,875
Totals for December, 1919	487,114	440,612	927,726
Registered gross tonnage of commercial vessels by nationality:			
Belgian	.....	5,072	5,072
British	253,935	214,979	468,914
Chilean	18,389	7,612	26,001
Chinese	.....	2,631	2,631
Costa Rican	158	158	316
Danish	13,059	5,937	18,996
Dutch	11,649	7,991	19,640
French	.....	11,561	11,561
German	.....	9,245	9,245
Italian	5,860	.....	5,860
Japanese	60,314	18,621	78,935
Norwegian	38,748	20,572	59,320
Peruvian	14,532	12,666	27,198

Item.	Cristobal.	Balboa.	Total.
Registered gross tonnage of commercial vessels by nationality—continued:			
Spanish	16,326	6,530	22,856
Swedish	6,590	4,952	11,542
United States	259,042	271,735	530,777
Totals for December, 1920	698,602	600,262	1,298,864
Totals for last month	593,207	590,865	1,184,072
Totals for December, 1919	632,917	570,399	1,203,316
Registered net tonnage of commercial vessels by nationality:			
Belgian	.....	3,094	3,094
British	158,449	135,258	293,707
Chilean	10,556	4,560	15,116
Chinese	.....	1,673	1,673
Costa Rican	93	93	186
Danish	8,219	3,597	11,816
Dutch	7,244	4,955	12,199
French	.....	7,370	7,370
German	.....	5,861	5,861
Italian	3,486	.....	3,486
Japanese	38,597	12,392	50,989
Norwegian	24,303	12,931	37,234
Peruvian	7,783	6,614	14,397
Spanish	10,416	4,005	14,421
Swedish	4,117	3,973	8,090
United States	168,073	176,046	344,119
Totals for December, 1920	441,336	382,422	823,758
Totals for last month	380,583	375,640	756,223
Totals for December, 1919	397,904	361,795	759,699
Tolls levied against commercial vessels by nationality:			
Belgian	.....	$3,938.75	$3,938.75
British	$199,739.23	167,126.14	366,865.37
Chilean	11,749.25	4,510.00	16,259.25
Chinese	.....	2,079.60	2,079.60
Costa Rican	180.00	180.00	360.00
Danish	10,979.00	5,809.20	16,788.20
Dutch	10,351.25	6,212.50	16,563.75
French	.....	9,047.50	9,047.50
German	.....	7,340.00	7,340.00
Italian	4,173.75	.....	4,173.75
Japanese	49,053.45	1,535.56	50,589.01
Norwegian	30,691.25	12,412.70	43,103.95
Peruvian	6,847.30	5,012.50	11,859.80
Spanish	12,212.83	5,022.50	17,235.33
Swedish	5,152.50	3,903.75	9,056.25
United States	213,679.60	218,909.21	432,588.81
Totals for December, 1920	554,809.41	453,039.91	1,007,849.32
Totals for last month	483,998.44	449,913.67	933,912.11
Totals for December, 1919	448,524.22	442,834.12	891,358.34
Tons of cargo carried by commercial vessels by nationality:			
Belgian	.....	7,000	7,000
British	180,716	154,174	334,890
Chilean	3,298	478	3,776
Chinese	.....	800	800
Costa Rican	18	356	374
Danish	12,505	8,914	21,419
Dutch	6,200	12,016	18,216
French	.....	12,958	12,958
German	.....	10,689	10,689
Italian	720	.....	720
Japanese	61,467	19,304	80,771
Norwegian	52,837	9,696	62,533
Peruvian	4,606	4,235	8,841
Spanish	17,440	8,631	26,071
Swedish	9,255	5,700	14,955
United States	270,389	202,137	472,526
Totals for December, 1920	619,451	457,088	1,076,539
Totals for last month	491,109	493,801	984,910
Totals for December, 1919	405,697	518,782	924,479
Vessels through the Canal free of tolls:			
U. S. Navy cruisers	2	.....	2
U. S. Navy mine sweepers	3	.....	3
U. S. Navy destroyers	2	.....	2
U. S. Navy tugs	2	1	3
U. S. Navy submarine	1	.....	1
U. S. Navy colliers	6	1	7
U. S. Navy launches	2	.....	2
U. S. Navy barge	1	.....	1
British tug with negative U. S. equivalent tonnage	.....	1	1
Totals	19	3	22

Item.	Cristobal.	Balboa.	Total.
Total ocean-going vessels passing through the Canal	164	122	286
Launches and miscellaneous craft passing through the Canal	4	2	6
Net tonnage of above, Panama Canal measurement	25	10	35
Total vessels and craft passing through the Canal	168	124	292
Cargo carried by government vessels on which no tolls were charged	40,236	.....	40,236
Commercial vessels through the Canal without cargo but not in ballast	2	.....	2
Net tonnage of above, Panama Canal measurement	7,693	.....	7,693
Vessel with passengers only passing through the Canal	1	.....	1
Net tonnage of above, Panama Canal measurement	8,436	.....	8,436
Motor vessels through the Canal	5	4	9
Net tonnage of above, Panama Canal measurement	9,872	4,303	14,175
Commercial vessel through the Canal with negative U. S. equivalent tonnage	.....	1	1
Net tonnage of above, Panama Canal measurement	.....	120	120
Commercial vessels through the Canal in ballast	5	19	24
Net tonnage of above, Panama Canal measurement	14,897	82,547	97,444
Tolls levied:			
On laden vessels	$524,524.45	$393,642.45	$918,166.90
On vessels in ballast	12,807.96	59,397.46	72,205.42
On vessels in ballast (laden rate account of excess fuel)	7,865.00	.....	7,865.00
On displacement tonnage	2,164.50	.....	2,164.50
On vessels with passengers only	7,447.50	.....	7,447.50
On launches and miscellaneous craft	24.25	1.50	25.75
Totals, all vessels	$554,833.66	$453,041.41	$1,007,875.07
Number, registered net and gross tonnage of vessels entering and clearing Canal ports, including ships transiting Canal:			
Numbering entering	314	288	602
Number clearing	316	286	602
Total, entering and clearing	630	574	1,204
Registered net tonnage of above, entering	1,072,663	895,269	1,967,932
Registered net tonnage of above, clearing	1,068,593	891,325	1,959,918
Total, entering and clearing	2,141,256	1,786,594	3,927,850
Registered gross tonnage of above, entering	1,671,374	1,385,417	3,056,791
Registered gross tonnage of above, clearing	1,660,290	1,385,901	3,046,191
Total, entering and clearing	3,331,664	2,771,318	6,102,982
Vessels entering port but not transiting Canal:			
Number entering	63	5	68
Registered gross tonnage of above	306,869	21,870	328,739
Registered net tonnage of above	190,976	15,189	206,165
Vessels clearing port but not transiting Canal:			
Number clearing	61	6	67
Registered gross tonnage of above	295,533	24,129	319,662
Registered net tonnage of above	180,197	17,338	197,535
Vessels transiting Canal and handling passengers or cargo at port:			
Number entering	50	55	105
Registered gross tonnage of above	218,809	185,141	403,950
Registered net tonnage of above	131,472	108,435	239,907
Number clearing	52	55	107
Registered gross tonnage of above	220,142	185,141	405,283
Registered net tonnage of above	132,649	108,435	241,084
Transit cargo arriving ..... tons	1,129,304	1,086,796	2,216,100
Transit cargo clearing ..... tons	1,106,485	1,102,993	2,209,478
Total transit cargo ..... tons	2,235,789	2,189,789	4,425,578
Cargo received for transshipment ..... tons	27,188	389	27,577
Cargo transshipped ..... tons	31,938	65	32,003
Local cargo arriving ..... tons	46,625	38,717	85,342
Local cargo shipped ..... tons	1,552	4,440	5,992
Total, local cargo ..... tons	48,177	43,157	91,334
Cargo handled by Receiving and Forwarding Agency, P. R. R.:			
Received ..... tons	55,317	2,920	58,237
Dispatched ..... tons	32,395	4,509	36,904
Rehandled ..... tons	3,512	1,233	4,745
Stevedored (included in above) ..... tons	36,495	4,571	41,066
Vessels supplied with bunker coal:			
Commercial vessels, other than P. R. R.	107	14	121
Panama Railroad vessels	6	1	7
U. S. Army vessels	5	1	6
Total vessels supplied with coal	118	16	134
Coal supplied above vessels:			
Commercial vessels, other than P. R. R. ..... tons	37,102	3,775	40,877
Panama Railroad vessels ..... tons	1,644	154	1,798
U. S. Army vessels ..... tons	403	65	468
Total coal supplied to vessels ..... tons	39,149	3,994	43,143

Item.	Cristobal.	Balboa.	Total.
Coal issues, miscellaneous:			
Panama Railroad departments.....tons..	961	26	987
U. S. Army, excepting vessels.....tons..	613	.....	613
Panama Canal departments.....tons..	1,465	542	2,007
Individuals and companies.....tons..	418	.....	418
Total coal furnished from Panama Canal deposits.....tons..	42,606	4,562	47,168
Coal on hand, January 1, 1921.....tons..	46,033	2,766	48,799
Coa on hand, December 1, 1920.....tons..	21,070	3,684	24,754
Coal received during December.....tons..	67,569	3,644	71,213
Coal, U. S. Navy Account.			
Issued to U. S. Navy, including vessels.....tons..	1,933	1,234	3,167
Coal on hand, December 1, 1920.....tons..	56,898	25,756	82,654
Coal on hand, January 1, 1921.....tons..	54,965	24,522	79,487
Vessels supplied with fuel oil from Panama Canal tanks:			
Commercial vessels other than P. R. R.....	4	.....	4
Panama Railroad vessels.....	3	.....	3
U. S. Army vessel.....	.....	1	1
Total vessels.....	7	1	8
Fuel oil supplied to above vessels:			
Commercial vessels, other than P. R. R.....bbls..	7,279	.....	7,279
Panama Railroad vessels.....bbls..	12,370	.....	12,370
U. S. Army vessels.....bbls..	.....	630	630
Total issues to vessels.....bbls..	19,649	630	20,279
Fuel oil issues, miscellaneous:			
To U. S. Army and Navy.....bbls..	102	355	457
To Panama Canal departments.....bbls..	5,970	27,154	33,124
To Panama Railroad departments.....bbls..	615	.....	615
To individuals and companies.....bbls..	3,333	6,115	9,448
Total issues from Panama Canal tanks.....bbls..	29,669	34,254	63,923
Fuel oil on hand, January 1, 1921.....bbls..	96,256	139,603	235,859
Fuel oil on hand, December 1, 1920.....bbls..	125,925	71,627	197,552
Fuel oil received during December.....bbls..	.....	102,230	102,230
Fuel oil pumped for individuals and companies.....bbls..	253,827	195,975	449,802
Diesel oil issued during the month.....bbls..	115	.....	115
Diesel oil on hand, January 1, 1921.....bbls..	53,461	1,083	54,544
Diesel oil on hand, December 1, 1920.....bbls..	53,576	1,083	54,659
Vessels supplied with water.....	200	92	292
Water sold to above vessels.....gals..	12,173,665	3,598,500	15,772,165
Vessels furnished commissary supplies:			
Commercial vessels, other than P. R. R.....	168	119	287
Panama Railroad vessels.....	14	2	16
U. S. Government vessels.....	19	16	35
Total vessels furnished supplies.....	201	137	338
Commissary sales to commercial vessels, other than those of P. R. R:			
Ice.....	$2,207.35	$867.45	$3,074.80
Wholesale groceries.....	11,038.86	3,831.80	14,870.66
Wholesale cold storage.....	34,111.94	17,895.85	52,007.79
Laundry.....	4,057.76	734.15	4,791.91
Miscellaneous.....	1,421.31	1,534.60	2,955.91
Total.....	$52,837.22	$24,863.85	$77,701.07
Commissary sales to Panama Railroad vessels:			
Ice.....	$362.02	$63.60	$425.62
Wholesale groceries.....	2,522.53	277.63	2,800.16
Wholesale cold storage.....	7,501.54	588.30	8,089.84
Laundry.....	955.24	.....	955.24
Miscellaneous.....	1,168.13	161.56	1,329.69
Total.....	$12,509.46	$1,091.09	$13,600.55
Commissary sales to Government vessels:			
Ice.....	$233.60	$337.39	$570.99
Wholesale groceries.....	3,982.21	2,642.38	6,624.59
Wholesale cold storage.....	15,589.59	8,335.41	23,925.00
Laundry.....	2,454.62	.....	2,454.62
Miscellaneous.....	1,401.10	270.59	1,671.69
Total.....	$23,661.12	$11,585.77	$35,246.89
Total commissary sales to all vessels:			
Month of December, 1920.....	$89,007.80	$37,540.71	$126,548.51
Month of November, 1920.....	$70,178.02	$31,164.02	$101,342.04
Month of December, 1919.....	$93,992.75	$57,479.34	$151,472.09

Item.	Cristobal.	Balboa.	Total.
Movement of passengers.			
Disembarking at Canal ports:			
First class—			
From Atlantic ports	1,485	.....	1,485
From Pacific ports	179	219	398
Total, first class	1,664	219	1,883
Other than first class—			
From Atlantic ports	2,258	.....	2,258
From Pacific ports	51	84	135
Total, other than first class	2,309	84	2,393
Total, disembarking at Canal ports	3,973	303	4,276
Embarking from Canal ports:			
First class—			
For Atlantic ports	1,035	1	1,036
For Pacific ports	243	146	389
Total, first class	1,278	147	1,425
Other than first class—			
For Atlantic ports	967	.....	967
For Pacific ports	62	94	156
Total, other than first class	1,029	94	1,123
Total, embarking at Canal ports	2,307	241	2,548
Remaining on board vessels:			
First class—			
Bound from Atlantic to Pacific ports	628	894	1,522
Bound from Pacific to Atlantic ports	259	294	553
Bound from Atlantic to Atlantic ports	399	.....	399
Bound from Pacific to Pacific ports	.....	55	55
Total, first class	1,286	1,243	2,529
Other than first class:			
Bound from Atlantic to Pacific ports	2,250	2,480	4,730
Bound from Pacific to Atlantic ports	919	965	1,884
Bound from Atlantic to Atlantic ports	70	.....	70
Bound from Pacific to Pacific ports	.....	355	355
Total, other than first class	3,239	3,800	7,039
Total remaining on board	4,525	5,043	9,568
Total passengers arriving	8,498	5,346	13,844
Total passengers departing	6,832	5,284	12,116
Arrivals in excess of departures	1,666	62	1,728
Services to American seamen:			
Seamen paid off	258	77	335
Seamen shipped	304	87	391
Seamen deserted	5	4	9
Seaman deceased	.....	1	1
Seamen lodged and subsisted	58	12	70
Seamen repatriated	45	1	46
Wages of American seamen:			
Total amount of wages earned	$22,382.10	$6,682.27	$29,064.37
Deductions approved by Deputy Shipping Commissioner	7,038.13	1,746.09	8,784.22
Balance due seamen	$15,343.97	$4,936.18	$20,280.15
Paid to seamen	12,187.45	3,662.65	15,850.10
Received on deposit for seamen	$3,156.52	$1,273.53	$4,430.05
Immigration deposits received	.....	$115.00	$115.00
Services to American vessels:			
Crews shipped	2	.....	2
Crews paid off	2	.....	2
Shipped articles written	2	1	3
Marine notes of protest noted	8	7	15
Bills of health issued	160	161	321
Clearances issued	165	161	326

LOCK OPERATIONS.

The following tabulations give the number of lockages, vessels through the locks, and the consumption of water for lockages, for the month of December, 1920:

COMMERCIAL VESSELS ONLY.

	Number of lockages.			Number of vessels.		
	North.	South.	Total.	North.	South.	Total.
Gatun	116	144	260	123	155	278
Pedro Miguel	104	125	229	118	149	267
Miraflores	116	144	260	118	149	267
Totals	336	413	749	359	453	812

TOTAL LOCKAGES OF VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Lockages.			
Commercial	260	229	260
Noncommercial, Army and Navy	11	11	16
Noncommercial, Canal equipment	7	25	23
Totals for December, 1920	278	265	299
Totals for November, 1920	246	266	266
Totals for December, 1919	268	291	257
Vessels.			
Commercial	278	267	267
Noncommercial, Army and Navy	25	23	24
Noncommercial, Canal equipment	17	55	52
Totals for December, 1920	320	345	343
Totals for November, 1920	292	293	288
Totals for December, 1919	312	341	244

CONSUMPTION OF WATER FOR LOCKAGES, LEAKAGES, ETC.

	Gatun.	Pedro Miguel.	Miraflores.
	Cubic feet.	*Cubic feet.*	*Cubic feet.*
Lockages	1,153,140,000	839,200,000	903,190,000
Leakage	30,000,000	17,710,000	59,000,000
Maintenance	.....	112,060,000	12,780,000
Totals for December, 1920	1,183,140,000	968,970,000	974,870,000
Totals for November, 1920	1,102,500,000	963,990,000	893,190,000
Totals for December, 1919	1,135,900,000	1,078,990,000	784,740,000

METEOROLOGY AND HYDROGRAPHY.

The rainfall for the month was below normal everywhere in the immediate vicinity of the Canal, dry season conditions beginning during the second week and continuing to the end of the month. The total rainfall ranged from 1.31 inches at Rio Boqueron, to 8.02 inches at Porto Bello. The greatest amount of rainfall recorded on any one day was 2.81 inches at Porto Bello on December 2.

The estimated rainfall over the Gatun Lake watershed was 3.10 inches, compared with a 10-year mean of 4.77 inches. Over the Chagres River watershed above Alhajuela it was 4.05 inches, compared with a 19-year mean of 8.98 inches.

The discharge of the Chagres River at Alhajuela was 2,180 c. f. s., being 44 per cent below the 19-year December average of 3,879 c. f. s., and furnished 50 per cent of the Gatun Lake total yield. The maximum momentary discharge for the month was 21,200 c. f. s., at elevation 100.7 on the 2d, and the minimum discharge was 1,160 c. f. s. on the 30th.

The Gatun Lake watershed total yield was 4,322 c. f. s., being 26 per cent below the 10-year December mean of 5,858 c. f. s. The maximum total yield for December was 9,923 in 1917 and the minimum total yield was 3,005 c. f. s. in 1918. The net yield for the month was 3,698 c. f. s., which is 30 per cent below the 10-year December average of 5,255 c. f. s. The lake varied from a maximum elevation of 87.04 feet on the 17th to a minimum elevation of 86.76 feet on the 1st, averaged 86.95 feet, and ended at elevation 86.96 feet midnight the 31st. An increase of approximately 900,000,000 cubic feet was effected by raising the surface elevation of the lake approximately 3 inches during the month.

The draft on the lake for lockages and power was 2,378 c. f. s. as compared with 2,348 c. f. s. for last month, and 2,290 c. f. s. for December, 1919. The ratio of water used for power and lockages was 2.2 to 1.

Miraflores Lake varied from a maximum elevation of 53.90 feet on the 26th to a minimum elevation of 51.75 feet on the 3d, averaged 52.71 feet, and ended at elevation 53.73 feet midnight the 31st.

Temperatures recorded during the month show a minimum of 64° F. at Alhajuela, and a maximum of 90° F. at each of the following stations: Balboa Heights, Gatun, and Alhajuela.

A slight seismic tremor of near-by origin was recorded on the 8th. This disturbance was felt by many people throughout the Zone and was especially noticeable in Colon. The distance of the epicenter of this disturbance, as indicated by the records, was 53 miles. A slight tremor of unknown origin occurred on December 10; and on December 16, tremors from a distant disturbance were recorded, the movement continuing for more than two hours.

ELECTRICAL DIVISION.

The combined gross output of the Gatun hydro-electric station for December was 6,079,700 KWH., on a computed water consumption of 4,377,432,000 cubic feet. The combined gross output of the Miraflores steam plant was 65,200 KWH., with an oil consumption of 2,617 barrels.

The total gross output of both stations was 6,144,900 KWH. The total loss of power in plant auxiliaries, transmission and transformation, was 934,199 KWH., or 16.1 per cent of gross output.

There were no interruptions in service on the transmission line during the month. The regular operation and maintenance was carried on at all substations without any extraordinary occurrences. Miscellaneous repairs and installations of electric equipment were made on 62 vessels during the month, 30 at Cristobal, and 32 at Balboa.

The following work was under progress during the month, with completion on December 31 as shown:

	Per cent completed.
Installation of 4 K-5 switches at Miraflores substation	73
Installation of two 1,000-ampere, K-12 switches at Cristobal substation	83
Installation of new 8,400 KVA transformer and 3 new tie-line equipments at Gatun substation	62
Installation of 2 complete feeder equipments at Balboa substation	95
Installation of three 400,000 c/m conductor tie lines between Gatun hydroelectric and substation	95
Transformers and other electrical work at new incinerator, Cristobal	[1] 75

[1] Indicates that no work was done during the month.

SHOP, FOUNDRY, AND DRY DOCK WORK.

The rebuilding of the steamship *Marne* was brought near to completion. The work remaining at the end of the month consisted mainly in fitting up quarters for the accommodation of the officers and crew, and ceiling and battening the cargo holds. Fires were lighted under the boilers on December 28, the auxiliary machinery was tried out, and a short preliminary dock trial held on December 31.

The remaining underwater work of rebuilding the tug *Bohio* was completed during the month; the boiler was reinstalled and repairs begun on the upper works. The submarine *R–24* was given an extensive overhaul and various minor alterations completed.

A new 2-inch automatic screw machine was received from the United States and installed, largely increasing the capacity of the Balboa shops for repeat manufacture in large numbers of small articles of a character suitable for making on automatic machines.

In addition to the above, miscellaneous repairs were made at the Balboa shops, on the following vessels during the month: Steamships *Pasadena*, *Glenpool*, *Haleakala*, *Pamona*, *Ardmore*, *Grelcaldy*, *Griffco*, *Mina Brea*, *General H. F. Hodges*, *Eldorado*, *General O. H. Ernst*, *West Comak*, *Stanley*, *Begona No. 1*, *Lake Ellijay*, *Advance*, *Eastern Temple*, *San Joaquin*, *Olockson*, *Lehigh*, *Nokatay*, *Waiotapu*, *Brave Coeur*, *Eastern Mariner*, *Lake Filbert*, and *Til-Til*; the U. S. S. *Cleveland*, *Neches*, *Tacoma*, *Frederick*, *Simpson No. 221*, and *Ballard No. 267*, U. S. subchaser *No. 284;* motor ships *Astoria* and *Laura C. Hall;* tugs *Gaitha* and *Genesee;* and barge *Griffson*.

The following vessels were in dry dock at Balboa during the month: Steamships *San Joaquin* and *Mina Brea;* tugs *Bohio* and *Mariner;* barges *Nos. 134* and *135;* and U. S. submarine *R–24*.

The more important repair work performed at the Cristobal shops during the month included the following: Overhauling of the feed pump, and repairing of the boiler and towing engine of the tug *Porto Bello*. Temporary repairs to the hull and stern tube of the steamship *Apalachee;* testing of crank and thrust shafts, of the tug

Ajax, and repairs to boiler, capstan, and piping; installation of davits and repairing of winches on the steamship *Arzilla;* general overhauling, cleaning and painting of the steamship *Balboa*, and renewal of propeller; repairs to boilers, and overhauling of steering engine of the steamship *Chile*.

In addition to the above, miscellaneous repairs were made on the following vessels: Steamships *Caribbean, Bahia Castillo, Creole State, Jamaica, Point Adams, Grace Dollar, Pastores, Benjamin Brewster, Forst, Crisfield, Ulysses, Metapan, General G. W. Goethals, Chile, Potosi, Peru, Wolliwia, Cartago, Shropshire, Allianca, Lake Ellijay. Colon, Panama, General O. H. Ernst, Huasco, Ulua, Essequibo, Cuba, Macoris, Karamoa, Ucayali, Achilles, Advance, Quilpue, Arzilla, Cristobal, Bradford, Sorata, Sebara, General W. C. Gorgas, Jason, C. A. Canfield, De Soto, Tamar, Caddo, Haiti, Pulaski, Heredia, Mantaro, Urubamba, Parismina, General H. F. Hodges, Newport, Toloa, Salvador, Culbertson*, and *Eastern Glen*, U. S. S. *McCormick, Whippoorwill, Poe, Sciota, Nereus*, and *Conestoga;* U. S. Army transports *Cambrai, Logan*, and *St. Mihiel;* tugs *St. Enoder* and *St. Anne;* barges *Mamei* and *Darien;* schooner *Jessie Nell;* U. S. D. B. *L-53* and launch *Putnam*.

The following vessels were dry-docked at Cristobal during the month: U. S. Eagle *No. 4*, U. S. Eagle *No. 32*, U. S. subchaser *No. 287*, U. S. S. *A. G. Forse*, Steamship *Balboa*, launches *Pequeni* and *Putnam*, and dredge *No. 86*.

The output of the Mechanical Division in patterns and castings, as compared with the preceding month, was as follows:

	November.			December.		
	Patterns.	Castings.	Pounds.	Patterns.	Castings.	Pounds.
Iron	37	1,722	59,466	36	1,471	68,932
Steel	23	633	60,969	14	870	96,942
Brass	33	1,410	25,763	49	1,842	15,929

The routine inspection, hostling and repair of equipment for the Panama Railroad Company was carried on during the month. The bodies of the new parlor cars *Ancon* and *Cristobal*, and the private car *Republic of Panama* were completed, ready for installation of furniture and fittings. Sixteen crews were given instruction in the handling of locomotives, and 33 crews instructed in oil and fuel economy during the month.

BUILDING CONSTRUCTION.

The following statement represents the degree of completion on December 31 of the more important work under construction by the Building Division:

	Per cent completed.
Silver townsite, Mount Hope:	
Twenty-one 12-family married quarters	[1] 100
Fourteen 12-family married quarters	[1] 99
Four 12-family married quarters	[1] 95
Four 32-room bachelor quarters	99
Four 32-room bachelor quarters	90
Two 32-room bachelor quarters	85
Commissary	[1] 99
Combination shop and warehouse, Cristobal	100
Royal Mail Steam Packet Company's office, Cristobal	65
Applying specification roofing to Pier No. 6, Cristobal	70
National Catholic War Council Building, Balboa	100
Bakeshop, workroom, and storage room, Ancon Hospital	100
Painting silver quarters, Gatun	25
Installation of refrigerator, Corozal dairy	[1] 98
Reroofing Cristobal bakery	85
Repairs to 35 houses, Cristobal	40
Construction of storehouses for quarantine officer, Cristobal	75
Manufacturing 250 chairs	70
Four hundred sixty-eight kitchenettes for silver townsite, Cristobal	50
Roof between Buildings 2 and 3, Balboa	50
Roof between Buildings 3 and 4, Balboa	35
Moving type-18 house from Las Cascadas to Cristobal	10

[1] Indicates that no work was done during the month.

Construction work for the Army and Navy is reported separately.

DREDGING DIVISION.

Dredging operations continued at Cucaracha Slide up to the 25th, one dipper dredge working on a double shift basis continuously. A distinct movement of material on the 18th shoved out into the basin at the foot of the slide, but in no way interfered with Canal traffic. The entire slide showed varying movement the entire month. Including the excavation for December, the dredges have removed a total of 2,233,500 cubic yards of earth and rock from this area since the slide of February 22, 1920.

Both Culebra and Barge Repair slides have shown some surface movement during the month. At East Culebra slide hydraulic grader No. 1 removed an estimated total of 45,000 cubic yards of material, while hydraulic grader No. 3 removed an estimated total of 45,000 cubic yards of earth and rock at Cucaracha slide.

The total excavation for December, including earth and rock, was 380,000 cubic yards, as follows:

Cubic yards.	Classified as—		Character of work.	Stations.	Equipment
	Earth.	Rock.			
				Cucaracha.	
(1) 73,700	7,400	66,300	Maintenance.....	1805-00 to 1814-00 E.....	*Cascadas.*
(1) 32,200	3,200	29,000	Maintenance.....	1805-00 to 1814-00 E.....	*Paraiso.*
				East Culebra.	
(1) 42,100	10,500	31,600	Maintenance.....	1769-00 to 1747-00 E.....	*Paraiso.*
				West Culebra.	
(1) 5,300	300	5,000	Maintenance.....	1786-00 to 1796-50 W.....	*Paraiso.*
				Powder House Slide.	
(1) 16,800	12,600	4,200	Maintenance.....	1632-00 to 1635-00 E.....	*Paraiso.*
				Gaillard Cut.	
(1) [2] 2,900	900	2,000	Maintenance.....	1830-00 to 1825-50 E.....	*Paraiso.*
				Gatun Lake.	
(3) 82,700	82,700	.....	Maintenance.....	1409-00 to 1434-00 W.....	*No. 86.*
				Miraflores Lake.	
(4) 70,000	70,000	.....	Maintenance.....	1978-00 to 1989-00 E.....	*No. 83.*
				Pacific Entrance.	
(5) 1,000	1,000	.....	Maintenance.....	Opposite docks 4 and 6.....	*Cascadas.*
(5) 500	500	.....	Construction.....	Opposite docks 4 and 6.....	*Cascadas.*
(5) 35,000	35,000	.....	Maintenance.....	2156-00 to 2167-00 C. 1 Cut.....	*No. 84.*
				Balboa inner harbor.	
(6) 2,400	.....	2,400	Construction.....	Dock No. 7.....	*Cascadas.*
(6) 6,500	6,500	.....	Maintenance.....	Dock No. 7.....	*Cascadas.*
(6) 8,900	8,900	.....	Aux. construction..	Between docks 4 and 6.....	*Cascadas.*
380,000	239,500	140,500			

[1] Gaillard Cut. [2] This dredge rehandled 10,000 cubic yards of rock, south of Cucaracha slide, for which no credit is given in above table. [3] Gatun Lake section. [4] Miraflores Lake. [5] Pacific entrance. [6] Balboa inner harbor.

The material excavated at the various stations was disposed of as follows:

	Cubic yards.
North of Gamboa	255,700
East side of prism, Miraflores Lake section	70,000
Flats, west of Canal at Pacific entrance	35,000
Sea dumps, Pacific entrance	19,300
Total	380,000

The following excavation remained to be done on January 1, 1921:

Location.	Earth.	Rock.	Total.
	Cu. yds.	*Cu. yds.*	*Cu. yds.*
Gaillard Cut	.....	25,000	25,000
Pacific entrance	47,000	80,900	127,900
Total, Canal prism	47,000	105,900	152,900
Balboa inner harbor	92,850	11,000	103,850
Total, ocean to ocean	139,850	116,900	256,750

MUNICIPAL ENGINEERING DIVISION.

The total output of all pumping stations for the month of December was 826,642,025 gallons; that of the 3 filtration plants, 506,947,000 gallons. The consumption of water in Panama City was 92,764,000 gallons, and that for Colon 81,350,350 gallons. Sales of water to 292 vessels at Balboa and Cristobal totaled 15,772,165 gallons.

Construction work, as itemized below, was under progress during the month, with completion on December 31, as shown:

Northern District.

	Per cent completed.
Municipal work, New Cristobal townsite:	
Grading	55
Roads	[1] 97.5
Water lines	[1] 72
Sidewalks	[1] 86
Sanitary sewers	[1] 75
Municipal work, Block No. 53, Cristobal:	
Grading	[1] 50
Roads	100

[1] Indicates that no work was performed during the month.

	Per cent completed.
Municipal work, Block No. 53, Cristobal—Continued.	
Track	100
Water lines	100
Sanitary sewers	100
Storm drains	100
Laying of 12-inch oil line to Dock 14	50
Construction of sidewalks on Lighthouse Road and Telephone Row, Gatun	[1] 30
Laying of two 12-inch oil lines to Pier 6	5
Laying of 6-inch Diesel oil line to Dock 16	5
Water and sewer connections for 2 type-17 houses	50
Southern District.	
Municipal work for 4 type-14 houses, Quarry Heights	[1] 95
Storm sewer, Javillo Fill	[1] 99
Sewer, Northern Avenue to beach	99.1
Box sewer, Panama Railroad yards	[1] 99
Concreting streets, new Santo Tomas Hospital	[1] 98
Municipal work for 3 type-18 houses, Balboa	[2] 60
Reconstruction of road, Quarry Heights	[1] 95
Water and sewer connections to Shrine building, Quarry Heights	91
Box sewer on 13th Street, Panama	[1] 99
Reconstruction of road to Paraiso store	[1] 81
New wash-water tank, Miraflores	70
Road from La Boca to oil-handling plant	95
Construction of culvert at Miraflores Lake	100
Construction of 12-inch storm sewer, Balboa clubhouse	80
Construction of curb and walk for Piza Piza	100

[1] Indicates that no work was performed during the month.
[2] Work discontinued, owing to lack of funds.

Municipal work for the Army and Navy is separately reported.

OCCUPATION OF QUARTERS.

Occupants of Panama Canal and Panama Railroad quarters on December 31, were classified as follows:

	Men.	Women.	Children.	Total.
Americans	3,481	2,270	2,649	8,400
Europeans	162	37	78	277
West Indians	4,816	2,108	4,258	11,182
Totals	8,459	4,415	6,985	19,859

WORKING FORCE.

(Effective December 15, 1920.)

Department or Division.	Gold.	Silver.	Total.
Operation and Maintenance:			
Office	28	38	66
Building Division	160	483	643
Electrical Division	220	251	471
Municipal Engineering	98	900	998
Lock Operation	181	631	812
Dredging Division	191	1,130	1,321
Mechanical Division	1,068	1,812	2,880
Marine Division	201	517	718
Fortifications	71	455	526
Totals	2,218	6,217	8,435
Supply Department:			
Quartermaster	221	1,672	1,893
Subsistence	32	373	405
Commissary	301	1,445	1,746
Cattle Industry—Plantations	22	349	371
Hotel Washington	10	90	100
Totals	586	3,929	4,515
Accounting	247	10	257
Health	246	824	1,070
Executive	570	259	829
Panama Railroad:			
Superintendent	64	512	576
Transportation	131	171	302
Receiving and Forwarding Agency	86	1,483	1,569
Coaling Stations	118	1,078	1,196
Totals	1,462	4,337	5,799
Grand total	4,266	14,483	18,749

VITAL STATISTICS.

A total of 178 deaths occurred during the month of December from the population comprising the Canal Zone and cities of Panama and Colon. Of the above deaths, 88 or 49.5 per cent occurred among children under 5 years of age. Tuberculosis, diarrhea and enteritis, and pneumonia, with 25, 23, and 13 deaths, respectively, were the leading causes of mortality in the order named. One hundred and five cases of malaria were reported, with no deaths. Diphtheria, influenza, typhoid fever, and dysentery each caused 1 death. Of the total deaths, 8 were due to external causes.

Three hundred and fifty-four births were reported during the month, 20 of which were stillbirths. Deaths among children under 1 year of age numbered 60, giving an infant mortality rate, based on the number of births reported for the month, of 179.6 per thousand.

Two cases of smallpox were admitted to hospital from Cristobal-Colon; with this exception no quarantinable diseases originated on the Isthmus or arrived at Canal Zone ports during the month.

RECEIPTS AND SALES OF MATERIALS AND SUPPLIES.

The total value of the material ordered on United States requisitions and received on the Isthmus during December was $735,013.85. Of this material, $702,316.63 was chargeable to Operation and Maintenance, $14,256.30 to Construction and Equipment, and $18,440.92 to miscellaneous departments.

The total cash sales on the Isthmus from storehouses and obsolete stores amounted to $142,270.45, of which $34,435.07 was for stock, $105,205.82 for fuel oil, $1,620.11 for scrap, and $1,009.45 for obsolete and second-hand material.

Sales to steamships from storehouses amounted to $90,648.42, of which $17,148.83 was for miscellaneous stock items, and $73,499.59 for fuel oil. Total sales of commissary supplies to all purchasers amounted to $1,107,315.56, made up as follows: To steamships other than United States Government vessels and those of the Panama Railroad Steamship Line, $75,895.60; to The Panama Canal, $144,549.04; to the United States Government, including the Army and Navy, $138,524.08; to individuals and companies, mainly through charge accounts at the retail commissaries, $31,243.02; to the Panama Railroad, including its steamships and the Hotel Washington, $39,393.41; and to individuals purchasing coupons, $677,710.41.

FINANCIAL RECEIPTS AND EXPENDITURES.

The cash balance in Canal appropriations on December 31, exclusive of fortifications, was $14,863,922.58. The balance in fortification funds allotted to The Panama Canal for expenditure was $489,653.91. Payments from appropriations made by the Disbursing Clerk, Washington, amounted to $983,635.92, and by the Paymaster on the Isthmus, to $1,511,443.46. Purchases of commissary books from the Panama Railroad Company amounted to $353,041.84. The total Canal collections on the Isthmus amounted to $2,274,273.64, and were classified as follows:

Repaid to appropriations	$887,022.72
Commissary and other trust funds	354,644.48
Tolls	1,007,875.07
Water rentals, Panama and Colon	3,199.35
Postal receipts	14,113.93
Licenses, taxes, court fees, fines, etc	7,410.39
Sale of construction material and equipment	7.70
Total	$2,274,273.65

Collections by the Disbursing Clerk, Washington, amounted to $40,540.52. Deposits of $86,000 were made with the Assistant Treasurer of the United States to be applied on payment of tolls and other charges against vessels using the Canal. Receipts from Canal Zone and miscellaneous funds amounted to $199,092.02; disbursements from the same source were $63,867.05.

December payrolls on the Isthmus aggregated $1,300,796.69, as compared with $1,278,824.04 for the preceding month, and $1,248,505.17 for the corresponding month 1 year ago.

Respectfully,

CHESTER HARDING,
Governor.

Postal Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending January 29, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Caribbean	Panama Railroad Cattle Industry	.....	January 23	.....	13
Mantaro	Peruvian Line	.....	January 24	.....	1,972½
City of Para	Pacific Mail Steamship Co	.....	January 25	.....	1,943
Cuba	Pacific Mail Steamship Co	January 24	January 26	922	154
Barima	Pacific Steam Navigation Co	.....	January 26	.....	757
Parismina	United Fruit Co	January 24	January 27	917	240
Guatemala	Pacific Steam Navigation Co	January 24	.....	151	.....
Jamaica	Pacific Steam Navigation Co	January 24	.....	228	.....
Rosana	A. Fait	January 24	January 27	200	(2)
San Bruno	United Fruit Co	January 25	January 26	45	220
War Begum	Anglo-Saxon Petroleum Co	January 25	January 27	7,800	(2)
[1] Mamei	Panama Railroad Steamship Co	January 25	.....	7,250	.....
San Juan	Pacific Mail Steamship Co	January 25	.....	62	.....
Abangarez	United Fruit Co	January 26	January 26	1	2
Santa Marta	United Fruit Co	January 26	January 27	1,015	222
Cape Breton	Pacific Steam Navigation Co	January 26	January 29	78	844
Caribbean	Panama Railroad Cattle Industry	January 26	.....	252	.....
Glen White	C. Curran & Bullitt	January 27	January 29	8,151	(2)
General W. C. Gorgas	Panama Railroad Steamship Line	January 28	.....	1,208	.....
Laura C. Hall	Pacific Metals Corporation	January 28	.....	76	.....
Ulua	United Fruit Co	January 28	January 29	4	145
Panama	Panama Railroad Steamship Line	January 29	.....	2,387	.....
San Bruno	United Fruit Co	January 29	January 29	5	(2)
Quillota	Pacific Steam Navigation Co	January 29	.....	44	.....
Urubamba	Peruvian Line	January 29	.....	2,286	.....

[1] Barge. [2] No cargo laded.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended January 29:

Steamship *Marne*, general repairs and rebuilding; launch *Captain Wilhelm*, hull repairs and installation of new engine; tug *Bohio*, general repairs and rebuilding; launch *Santa Rita*, rebuilding; barges *Nos. 132*, *134*, and *135*, general repairs; motor ship *Astoria*, small miscellaneous repairs to engine and crank shaft; mine yawl *No. 101*, hull repairs and overhauling of engine; U. S. S. *Neches*, miscellaneous boiler repairs; subchaser *No. 284*, docking and miscellaneous repairs; U. S. S. *Cleveland*, miscellaneous repairs; steamship *S. V. Harkness*, miscellaneous heavy repairs; U. S. S. *Dolphin*, small miscellaneous repairs; steamship *Azeus*, repairs to main engine; V. de G. C. *Almirante Latorre*, docking and miscellaneous repairs; motor ship *Siam*, repairs to hull, bilge, and ballast system, and docking; U. S. S. *Kennedy*, small miscellaneous repairs to main turbines; U. S. S. *Arkansas*, small miscellaneous repairs; U. S. S. *Glacier*, dock, stage and clean, paint, and miscellaneous repairs; steamship *Sussex*, docking, staging, cleaning, painting, and heavy hull repairs; tender *Perico*, docking, staging, cleaning, painting, and miscellaneous repairs; U. S. S. tug *Ontario*, miscellaneous steam engineering repairs; steamship *Maricopa*, miscellaneous engine and boiler repairs; barge *Al*, docking, staging, cleaning, painting, and hull repairs; steamships *La Habra*, small miscellaneous repairs; *Betsy Bell*, repairs to boilers and generator; *Steel Voyager*, repairs to oil pipes; Admiral's barge, miscellaneous repairs; steamships *Cuba*, dock and install one blade on wheel: *Heber*, repairs to damaged forepeak; U. S. S. *Dahlgren*, repairs to main and auxiliary steam line; steamship *Lake Fanbush*, minor repairs; U. S. S. *Sciota*, minor repairs; U. S. S. *Sapelo*, repairs to sextants; steamship *Eastern Sword*, miscellaneous small repairs; motor ship *Cethana*, miscellaneous boiler repairs.

The following vessels were at Cristobal shops for repairs during the week ended January 31:

Steamships *General W. C. Gorgas*, *Panama*, and *Ulysses*, barges *Mamei* and *Darien*, miscellaneous repairs and painting to engine, deck, and steward departments; steamships *Guatemala*, install 2 pumps, make accommodation ladder, etc.; *North American*, repair hull and frames; repair winches, blower engine, etc.; U. S. S. *Shawmut*, make new crank shaft for ice machine, plane crosshead slippers, renew staybolts, repair motor boat, etc.; steamship *Agron*, repair anchor windlass; U. S. S. *Sandpiper*, make 4 impellers, renew tiller cables, etc.; steamship *San Juan*, repair boiler, ice machine, evaporator, etc.; launch *McKie*, repair hull and engine; steamship *Matinicock*, repair boiler; launch *Capron*, repair hull, sheathing, engine, pump, etc.; steamships *Urubamba*, weld hawse pipes, etc.; *Parismina*, *Margaret Coughlin*, *Barima*, *Caribbean*, motor ship *Laura C. Hall*, steamships *Pacific*, U. S. S. *Gannet*, steamship *Wolverine State*, launch *Corso*, steamship *Quilpue*, launch *Eunice*, minor repairs.

Distribution of cargo passing through the Canal from the Pacific to Atlantic, December, 1920.[1]

From—	North America.							Europe.													
	United States.																				
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States	West Indies.	Atlantic terminus, Panama Canal.	Total, North America.	British Isles.	Denmark.	France.	Germany.	Portugal.	Belgium.	Sweden.	Spain.	Europe.[2]	Total, Europe.	Azores.[3]	Grand totals.	Per cent of total cargo
South America:																					
Chile	41,038	49,077	14,711	104,826	5,374	5,390	115,590	17,265	8,914	18,090	5,795	.....	14,500	5,700	9,326	1,914	81,504	19,345	216,439	47.6
Colombia	300	.....	.....	300	.....	587	887	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	887	0.2
Ecuador	4,758	.....	.....	4,758	.....	1,672	6,430	.....	.....	.....	100	.....	.....	.....	32	138	270	.....	6,700	1.4
Peru	9,528	.....	.....	9,528	.....	4,196	13,724	8,059	.....	.....	.....	.....	.....	.....	.....	.....	8,059	.....	21,783	4.6
[2] West coast of South America	.....	.....	.....	.....	.....	6,121	6,121	6,026	.....	.....	.....	.....	.....	.....	.....	.....	6,026	.....	12,147	2.6
Total, South America	55,624	49,077	14,711	119,412	5,374	17,966	142,752	31,350	8,914	18,090	5,895	.....	14,500	5,700	9,358	2,052	95,859	19,345	257,956	56.4
North America:																					
West coast of United States	34,917	.....	433	35,350	1,816	37	37,203	71,727	.....	.....	5,863	6,500	15,736	.....	.....	.....	99,826	.....	137,029	30.0
West coast of Canada	.....	.....	.....	.....	.....	.....	.....	5,536	.....	.....	.....	.....	.....	.....	.....	.....	5,536	.....	5,536	1.2
West coast of Central America	41	.....	.....	41	.....	1,385	1,426	.....	.....	133	.....	.....	.....	.....	.....	.....	133	.....	1,559	0.3
Total, North America	34,958	.....	433	35,391	1,816	1,422	38,629	77,263	.....	133	5,863	6,500	15,736	.....	.....	.....	105,495	.....	144,124	31.5
Asia:																					
China	4,593	.....	.....	4,593	800	.....	5,393	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,393	1.2
Japan	631	.....	.....	631	.....	.....	631	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	631	0.14
Philippines	663	.....	.....	663	.....	.....	663	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	663	0.14
East Indies	5,393	.....	.....	5,393	.....	.....	5,393	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,393	1.2
Total, Asia	11,280	.....	.....	11,280	800	.....	12,080	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12,080	2.7
Australasia:																					
Australia	3,244	.....	.....	3,244	.....	.....	3,244	5,863	.....	.....	.....	.....	.....	.....	.....	.....	5,863	.....	9,107	2.0
New Zealand	9,725	.....	.....	9,725	.....	.....	9,725	24,096	.....	.....	.....	.....	.....	.....	.....	.....	24,096	.....	33,821	7.4
Total, Australasia	12,969	.....	.....	12,969	.....	.....	12,969	29,959	.....	.....	.....	.....	.....	.....	.....	.....	29,959	.....	42,928	9.4
Grand totals	114,831	49,077	15,144	179,052	7,990	19,388	206,430	138,572	8,914	18,223	11,758	6,500	30,236	5,700	9,358	2,05[illegible]	31,313	19,345	457,088	100.0
Per cent of total cargo	25.1	10.7	3.3	39.1	1.8	4.3	45.2	30.3	1.9	3.9	2.7	1.3	6.7	1.3	2.0	0.[illegible]	50.6	4.2	100.0	
Percentage last month	22.1	12.5	2.1	36.7	2.2	3.1	48.3	26.9	1.8	0.4	2.8	4.0	.....	0.0	.....	2.[illegible]	53.7	.....	.....	.....

[1] By tons of 2,240 pounds.

[2] General cargo, not routed so as to allow segregation among various ports.

[3] For orders.

Distribution of cargo passing through the Canal from the Atlantic to the Pacific, December, 1921.[1]

From—	South America.						North America.						Asia.						Australasia.				Grand total.	Per cent of total cargo.
	Chile.	Colombia.	Ecuador.	Peru.	West coast, South America.[2]	Total, South America.	West coast, United States.	Pacific terminus, Panama Canal.	West coast, Canada.	West coast, North America.[2]	West coast, Central America.	Total, North America.	China.	Japan.	Philippines.	Malay Peninsula.	Far East.[2]	Total, Asia.	Australasia.[2]	Australia.	New Zealand.	Total, Australasia.		
North America:																								
North Atlantic ports	61,329	38	901	10,139	12,321	84,728	45,378	.....	....	1,172	42	46,592	16,753	20,926	18,449	1,200	37,871	95,199	22,473	....	20,892	43,365	269,884	43.7
South Atlantic ports	91,779	.....	.....	.....	.....	91,779	.....	9,372	....	.....	3,124	12,496	2,293	2,000	.....	.....	14,173	18,466	.....	....	9,255	9,255	131,996	21.4
Gulf ports	.....	.....	.....	.....	3,192	3,192	6,704	.....	....	.....	890	7,594	17,309	17,517	.....	.....	1,139	35,965	.....	....	.....	.....	46,751	7.5
[2]East coast, U. S.	.....	.....	.....	.....	.....	.....	.....	7,500	....	.....	.....	7,500	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	7,500	1.2
Total, United States	153,108	38	901	10,139	15,513	179,699	52,082	16,872	....	1,172	4,056	74,182	36,355	40,443	18,449	1,200	53,183	149,630	22,473	....	30,147	52,620	456,131	73.8
East coast, Mexico	56,478	.....	.....	9,405	.....	65,883	8,000	7,500	....	.....	.....	15,500	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	81,383	13.1
East coast, Canada	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,583	....	.....	7,583	7,583	1.2
Panama Canal, Atlantic terminus	1,692	1,184	350	4,221	4,446	11,893	.....	.....	....	1,406	2,714	5,120	.....	.....	.....	.....	.....	.....	.....	50	.....	50	17,063	2.8
Total, North America	211,278	1,222	1,251	23,765	19,959	257,475	60,082	24,372	....	2,578	7,770	94,802	36,355	40,443	18,449	1,200	53,183	149,630	30,056	50	30,147	60,253	562,160	90.9
Europe:																								
British Isles	4,976	.....	.....	.....	6,449	11,425	2,297	.....	500	.....	.....	2,797	.....	.....	.....	.....	.....	.....	7,500	....	16,452	23,952	38,174	6.2
Belgium	.....	.....	.....	.....	.....	.....	75	.....	....	.....	.....	75	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	75	.....
Denmark	.....	.....	.....	.....	.....	.....	3,476	.....	....	.....	.....	3,476	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	3,476	0.5
Italy	720	.....	.....	.....	.....	720	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	720	0.1
Holland	3,189	.....	.....	150	.....	3,339	6,822	.....	....	.....	.....	6,822	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	10,161	1.6
[2] Europe	.....	.....	50	.....	3,041	3,091	1,070	.....	....	.....	.....	1,070	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	4,161	0.6
Total, Europe	8,885	.....	50	150	9,490	18,575	13,740	.....	500	.....	.....	14,240	.....	.....	.....	.....	.....	.....	7,500	....	16,452	23,952	56,767	9.1
East coast, South America	.....	524	.....	.....	.....	524	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	524	0.1
Grand totals	220,163	1,746	1,301	23,915	29,449	276,574	73,822	24,372	500	2,578	7,770	109,042	36,355	40,443	18,449	1,200	53,183	149,630	37,556	50	46,599	84,205	619,451	100.0
Per cent of total cargo	35.7	0.3	0.2	3.8	4.8	44.8	12.1	.....	0.1	0.4	1.2	17.6	5.9	6.5	2.9	0 2	8.6	24.1	6.0	....	7.5	13.5	100.0	....
Percentage last month	25.0	0.5	0.5	3.3	10.6	40.4	15.7	3.8	2.1	1.8	1.0	20.7	2.6	2.2	2.0	.....	5.2	11.9	5.7	11.1	10.2	27.0	.....	....

[1] By long tons. 2,240 pounds.

[2] General cargo, not routed so as to allow segregation among various ports.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, January 29, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Angamos [2]	21	10.20	23	6.30	23	13.50	25	16.05	Chilean	Chilean Government	377.1	44.3	25.0	Bridgetown	Valparaiso	Ammunition, etc.	2,500	4,120	2,286
Sibbald [2]	21	9.57	23	6.33	23	14.40	25	16.05	Chilean	Chilean Government	141.7	29.0	15.0	Bridgetown	Valparaiso	Ballast			
Hermion	22	19.15	23	6.40	23	14.39	26	13.01	Norwegian	Bruusgaard Kiosterud	390.0	54.0	16.6	Norfolk	Portland	Ballast		5,746	4,232
Alvarado	23	13.54	24	6.30	24	13.25	24	16.20	American	Swayne & Hoyt	245.0	41.5	15.6	New Orleans	San Francisco	General mdse	2,126	2,122	1,504
Maricopa	23	17.05	24	6.30	24	15.25	27	20.00	Norwegian	W. Wilhelmsen	425.0	52.0	27.8	Tampico	Toeopilla	Crude oil	9,500	6,996	5,108
Mantaro	17	18.41	24	6.40	24	13.30	24	15.00	Peruvian	Peruvian Line	361.0	46.0	19.0	Cristobal	Callao	General	1,971	4,838	2,959
Lehigh	24	6.33	24	7.40	24	15.30	24	16.25	American	North Atl. & Western Co. (S. B.)	390.0	54.2	19.0	Philadelphia	Seattle	General, steel	2,318	6,106	4,346
Sapelo	24	8.24	24	8.55	24	16.25			American	United States Navy	461.6	60.0	27.0	Port Arthur	Balboa	Fuel oil	(*)		
S. C. 285			24	13.15	24	17.40			American	United States Navy				Cristobal	Balboa				
City of Para	21	13.55	25	6.06	25	14.05	26	16.55	American	Pacific Mail Steamship Co.	345.0	38.6	20.7	Cristobal	San Francisco	General		3,739	2,459
Balboa	22	20.39	25	6.06	25	13.03	25	17.50	American	Colombian Maritime Co.	190.0	29.1	11.9	Cristobal	Buenaventura	General	62½	741	350
La Habra	25	5.05	25	7.24	25	16.03	27	15.30	Norwegian	W. Wilhelmsen	424.8	57.0	26.2	Tampico	Antofagasta	Crude oil	9,200	7,053	5,085
West Katan	25	8.43	25	9.05	25	16.20	26	1.15	American	Williams, Dimond & Co. (S. B.)	410.0	54.0	19.0	London	Los Angeles	General	1,566	6,573	4,901
Ulysses	25	9.12	25	9.30	25	17.45			American	Panama Railroad Steamship Line	535.0	63.0	29.0	Norfolk	Balboa	Coal	11,998	11,519	6,930
Australie	25	8.35	25	10.43	25	17.36	26	0.13	Swedish	Trans. Atlantic Co.	381.0	49.0	25.6	Norfolk	Lyttleton		5,812	5,169	3,736
Chassie Maersk	25	10.36	25	11.55	25	18.45	25	22.03	Danish	A. P. Moller	362.0	51.0	26.6	Baltimore	Valparaiso	Coal and coke	6,077	4,993	3,473
Walter A. Luckenbach	25	7.55	25	13.00	25	19.35	25	20.25	American	Luckenbach Line	468.0	56.0	31.0	New York	Los Angeles	General	7,162	8,785	6,592
Helikon	25	12.10	25	13.17	25	20.08	26	1.15	Norwegian	Bruusgaard Kiosterud	270.6	40.1	18.0	Baltimore	Guayaquil	Coal	1,808	2,304	1,493
Sciota [2]			25	8.14	25	15.43			American	United States Navy				Cristobal	Balboa				
Cuba	25	13.56	26	6.05	26	13.24	28	22.20	American	Pacific Mail Steamship Co.	307.7	42.2	20.9	Baltimore	San Francisco	General	2,372	3,429	2,206
Kansas	25	23.59	26	7.15	26	15.02	27	1.30	British	Ellerman & Bucknall	431.0	55.0	27.0	New York	Brisbane	General	8,500	7,391	5,747
Hesperos	26	6.40	26	8.00	26	15.17	26	16.30	Norwegian	Bruusgaard Kiosterud	390.0	54.0	25.0	Baltimore	Valparaiso	Coal	6,983	5,693	4,230
Barima	10	23.50	26	8.25	26	16.03	26	17.25	British	Pacific Steam Navigation Co.	220.0	37.0	13.11	Southampton	Champerico	General	747	1,651	918
Steelmaker	26	13.50	26	14.15	26	21.12	26	22.05	American	United States Steel Products Co.	395.0	55.0	28.0	New York	San Diego	General	8,600	7,285	5,256
Rosana	24	21.55	27	6.06	27	15.06	28	7.37	Costa Rican	Alberto Fait	112.0	25.0	7.0	Cristobal	Puntarenas	Ballast		256	152
Mineola	26	20.50	27	6.10	27	13.35	27	14.30	American	W. R. Grace & Co.	298.6	40.0	20.0	New York	Talara	General	2,300	2,835	1,822
Mongolian Prince	26	15.16	27	6.29	27	15.12	27	16.12	British	Prince Line Limited	421.0	56.0	25.3	New York	Shanghai	General	8,000	6,460	4,735
Margaret Coughlan	26	10.07	27	6.32	27	14.00	27	15.18	British	Canadian Western Co.	427.0	54.1	15.1	Garston	Vancouver	Ballast		6,624	4,999
Lompoc	26	20.01	27	7.00	27	16.04	27	19.00	British	C. T. Bowring & Co.	435.0	55.9	27.6	Tampico	Toeopilla	Fuel oil	10,000	7,488	5,342
Arizonan	27	12.16	27	12.35	27	19.05	27	20.00	American	United American Line	470.0	57.0	22.4	New York	Los Angeles	General	4,000		
West Campgaw	27	15.30	28	6.23	28	14.32	29	3.30	American	Barber Steamship Line (S. B.)	410.3	54.2	25.0	New York	Hongkong	General	7,200	6,587	3,452
Jalapa	27	20.05	28	6.27	28	15.38			American	Thorndyke Trenholm Co. (S. B.)	402.6	53.0		Norfolk	Balboa	Coal	8,036	6,580	4,856

[2] Transport. [3] Tug. * 72,400 barrels.

Pengreep	27	18.26	28	6.30	28	15.25	28	16.50	British	R. B. Chellon	390.0	52.0		St. Vincent	Portland	Ballast		5,247	3,783
Hankow Maru	28	5.45	28	7.57	28	16.08	28	19.49	Japanese	Kokusai Kisen Kabushiki Kaisha	345.0	48.0	21.0	New York	Kobe	General	2,590	4,215	2,924
Steel Worker	28	23.30	29	7.05	29	13.45	29	19.16	American	Isthmian Steamship Lines	424.2	56.2	26.0	New York	San Pedro	Steel products	8,350	7,539	5,495
Cecil County	29	6.18	29	7.35	29	16.27	29	18.57	American	Colombia Shipping Co. (S. B.)	459.0	53.0	25.4	Tampico	Iquique	Crude oil	10,000	8,097	5,400
Sandpiper	23	5.35	29	7.36	29	14.03			American	United States Navy	187.0	35.0	16.0	High seas	Balboa				
George Washington [3]	29	3.50	29	7.57	29	15.25	30	15.43	Norwegian	Peter Olsen	425.0	55.0	19.6	Antwerp	San Francisco	General	4,831	7,505	5,627
Birmingham City	29	7.21	29	12.30	29	20.21	29	21.25	American	United States Steel Products Co.	395.5	55.0	28.0	New York	Kobe	Rails, plates, etc.	8,165	6,841	4,686
S. C. 285			29	11.15	29	14.53			American	United States Navy				Cristobal	Gatun				

[3] Motor ship.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Lake Fanbush	22	8.30	23	6.37	23	13.50	23	14.00	American	N. O. & S. A. S. S. Co.	251.0	43.6	23.6	Mejillones	Pensacola	Nitrate	3,610	2,861	1,812
Woodarra	22	15.00	23	6.31	23	13.44	23	16.05	British	British India Steam Nav. Co.	449.5	58.3	22.6	New Zealand	Falmouth	Frozen meat	3,500	8,209	5,313
Honduras	22	17.00	23	7.55	23	15.45	25	9.14	French	Cie. Gle. Transatlantique	405.0	51.6	23.0	Valparaiso	Cristobal [8]	Nitrate	6,000	6,020	4,363
Lewis K. Thurlow	22	17.30	23	8.14	23	16.35	23	17.45	American	Crowell & Thurlow	313.5	46.1	21.0	Iquique	Wilmington	Nitrate	4,415		
Charles H. Cramp	22	22.20	23	9.05	23	15.37	25	11.11	American	Atl. Gulf & Pacific S. S. Corp.	404.0	53.9	15.1	Aberdeen	Baltimore	General, lumber	5,687	6,755	4,688
Agron	22	8.30	23	12.00	23	20.50			American	Universal Shipping & Trad. Co.	273.5	49.1	15.0	Iquique	Galveston	Ballast		3,273	2,135
Commodore [4]			23	8.30	23	20.30			American	United States Army				Balboa	Cristobal				
Guernica	23	18.10	24	8.04	24	16.30	27	7.20	Spanish	Soct. Auxiliar Maritima	325.5	46.9	19.6	Taltal	Cristobal [8]	Nitrate	4,000	3,791	2,540
Transvaal	23	23.00	24	8.06	24	15.40	24	17.13	Danish	Orient Steamship Co.	360.2	51.2	25.0	Mejillones	Dover [8]	Nitrate	6,518	4,853	3,476
Benjamin Brewster	23	22.10	24	9.01	24	16.55	25	3.10	American	Standard Oil Co. of N. J.	411.6	53.4	29.8	Vancouver	Tampico	Ballast		6,360	4,337
Jamaica	24	0.05	24	12.35	24	19.10			British	Pacific Steam Navigation Co.	220.0	34.0	12.4	Champerico	Cristobal	General	228	1,187	622
Rosana [3]	24	13.00	24	13.35	24	21.55	27	6.06	Costa Rican	Alberto Fait	112.0	25.0	8.0	Puntarenas	Cristobal	Lumber	200	256	152
Guatemala	24	11.30	24	14.25	24	21.50			British	Pacific Steam Navigation Co.	359.3	43.3	15.9	Valparaiso	Cristobal		151	4,267	2,790
Stephen R. Jones	24	14.15	25	7.21	25	14.35			American	Crowell & Thurlow	354.2	49.0	15.0	Valparaiso	Cristobal [8]	Ballast		4,627	3,277
San Juan	25	5.00	25	10.19	25	16.50			American	Pacific Mail Steamship Co	283.0	37.0	14.6	San Francisco	Cristobal	General	62.32	2,379	1,593
S. C. 285	24	17.40	25	9.35	25	16.40	29	11.15	American	United States Navy				Balboa	Cristobal				
Glencarn	25	9.15	25	10.21	25	19.10	26	2.45	British	R. J. Thomas & Co.	399.0	50.5	24.6	Iquique	Fayal [8]	Nitrate	7,500		
Nils	25	11.55	25	12.25	25	19.19	25	29.55	Norwegian	H. L. Meyer & Leif	265.0	42.1	10.5	Talara	New Orleans	Ballast		2,117	1,404
Sudbury	25	17.30	26	6.22	26	13.43	26	13.43	American	United American Lines, Incorp.	384.8	51.2	23.0	Seattle	Philadelphia	Lumber, general	4,156	4,017	2,958
Armagh	26	0.55	26	7.39	26	14.52	26	17.10	British	Union Steamship Co.	530.5	63.0	28.0	Sydney	Liverpool	Frozen, general	7,517	12,857	8,665
U. S. S. Sapelo [5]	24	16.25	27	7.22	27	14.45	29	6.45	American	United States Navy	461.6	60.0	20.0	Balboa	Port Arthur	Ballast		8,672	6,499
Bartolo	27	0.20	27	8.03	27	15.40	27	19.30	Spanish	Astagaraga & Sons	324.0	47.1	20.2	Taltal	Colon [8]	Nitrate	4,413	3,317	2,429
U. S. S. Gannet [6]	26	18.40	27	10.12	27	16.55			American	United States Navy	187.0	35.0	13.0	San Diego	Cristobal				
Aspinet	27	9.20	27	11.24	27	18.10	27	23.05	British	Standard Transportation Co.	390.0	52.1	13.0	Moji, Japan	New York	Ballast		5,287	3,837
W. S. Miller	27	12.40	27	14.54	27	22.10	27	22.10	American	Standard Oil Co.	435.0	56.0	28.5	San Francisco	Paulsboro	Lubricating oil	9,576		
Iceland	26	21.30	27	15.02	27	23.14	27	23.25	American	U. S. & A. Line	400.7	54.2	24.6	Melbourne	New York	Wool, general	6,824	6,528	4,732
Laura C. Hall [7]	27	16.10	28	6.26	28	14.47	30	6.52	British	Pacific Metals Transp.	81.0	25.6	10.0	Buenaventura	Cristobal	Platinum, coffee	76	130	69
Ulysses	25	17.45	28	6.35	28	13.10	30	8.12	American	Panama Railroad Steamship Line	535.0	63.0		Balboa	Norfolk	Ballast		11,519	6,930
Steel Voyager	27	1.45	28	6.57	28	13.50	28	13.50	American	United States Steel Products Co.	395.5	55.0	26.0	San Francisco	London	General	5,773	7,285	5,256
Port Napier	27	23.00	28	8.27	28	15.45	28	17.58	British	Commonwealth and Dom. Line	490.2	61.4	25.8	Melbourne	London	General	7,344	10,987	8,165
Miskianza	27	22.15	28	8.35	28	15.46	28	16.00	American	S. McAllister & Bros.	425.0	57.0	18.3	San Francisco	Tecomate	Ballast			
Pacific	27	17.05	28	8.48	28	17.30	30	18.38	Norwegian	Wilhelm Torkildsen	400.0	56.2	23.9	Iquique	Europe	Nitrate	7,722	6,479	4,709

[4] Launch [5] Tanker. [6] Mine sweeper. [7] Motor schooner. [8] For orders. Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC—continued.

Indian City	28	10.22	28	12.04	28	20.00	23	21.40	British	St. Just Steamship Co.	411.7	54.5	17.0	San Francisco	United King.	Barley	8,625	6,512	4,665
Azeus	13	16.53	29	6.50	29	14.42			British	Anglo-Grecian Steamship Co.	361.0	46.2	23.6	Mejillones	Newport News	Nitrate	5,900	4,510	3,388
Eastern Sword	27	5.50	29	7.15	29	14.43			American	Swayne & Hoyt	330.3	46.1	20.0	Seattle	New Orleans	Lumber, general	2,700		
Orita	28	22.00	29	8.45	29	16.10			British	Pacific Steam Navigation Co.	485.4	58.2	29.0	Puntarenas	Liverpool	General	7,450	9,921	6,692
Ascutney	29	5.30	29	3.27	29	17.25	30	12.35	American	Atlantic Adriatic S. S. Co.	389.0	46.0	26.0	Antofagasta	U. S. ports	Nitrate	6,300	5,039	3,045
Quillota	29	11.00	29	11.34	29	19.35	31	7.26	British	Pacific Steam Navigation Co.	361.4	46.2	17.5	Guayaquil	New York	General	458	4,758	2,956
Urubamba	29	12.10	29	13.53	29				Peruvian	Peruvian Steamship Co.	381.2	45.9	21.6	Callao	Cristobal	Copper, etc.	2,286	4,893	2,951
Astoria [3]	12–14	0.15	29	13.56	([10])				American	Viking Shipping Co.	229.4	44.0	20.8	Astoria	Philadelphia	Railroad ties, etc.	([11])		
Omega [9]	12	12.05	29	14.52					Peruvian	Peruvian Government	311.3	43.2	23.0	Callao	London	Guano	4,000		

[9] Bark. [10] Anchored in Gatun Lake. [11] 1,493,732 feet B. M.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel	Line.	From—	Date.	Vessel.	Line.	For—
January 20	Harding [12]	United States Navy	Guantanamo.	January 23	Caribbean	Panama Railroad Cattle Industry	Cartagena.
January 19	Shawmut [12]	United States Navy	Guantanamo.	January 23	Ajax [2]	Curacao Petroleum Co	Tampico.
January 24	Parismina	United Fruit Co	New Orleans.	January 23	Cristobal	Panama Railroad Steamship Line	Norfolk.
January 25	Mamei [13]	Panama Railroad Steamship Line	Norfolk.	January 24	Ancon	Panama Railroad Steamship Line	Norfolk.
January 25	War Begum	Anglo-Saxon Petroleum Co	Curacao.	January 25	Somme [7]	United States Army	New York via San Juan.
January 25	San Bruno	United Fruit Co	Boston.	January 26	San Bruno	United Fruit Co	Port Limon.
January 26	Abangarez	United Fruit Co	New Orleans via wayports	January 25	Abangarez	United Fruit Co	New Orleans.
January 26	Cape Breton	Lyle Shipping Co	London via wayports.	January 27	Santa Marta	United Fruit Co	Colombian ports.
January 26	Santa Marta	United Fruit Co	New York via Kingston.	January 27	Parismina	United Fruit Co	New York via Bocas del Toro, and Habana.
January 26	Santa Leonora	United States Army	New York.	January 27	Jeanne d'Arc [14]	French Government	France via wayports.
January 27	Caribbean	Panama Railroad Cattle Industry	Cartagena.	January 27	War Begum	Anglo-Saxon Petroleum Co	Curacao.
January 27	Glen White	C. Curran & Bullitt	Norfolk.	January 28	Harding [14]	United States Navy	High seas.
January 28	Gen. W. C. Gorgas	Panama Railroad Steamship Line	New York via Haiti.	January 29	Glen White	C. Curran & Bullitt	Hampton Roads.
January 28	Ulua	United Fruit Co	New York via wayports.	January 29	Ulua	United Fruit Co	New York via Port Limon and Habana.
January 29	Panama	Panama Railroad Steamship Line	New York via Haiti.	January 29	San Bruno	United Fruit Co	Boston.
January 29	San Bruno	United Fruit Co	Port Limon.	January 29	Cape Breton	Lyle Shipping Co	Puerto Colombia.
.....	.....	.....	.....				
.....	.....	.....	.....				

[12] Destroyer. [13] Barge. [14] Cruiser.

PORT OF BALBOA.

January 20	Saugford [12]	United States Navy	San Diego.	.....	.....	.....	.....
January 28	Cethana [3]	Pacific Motor Ship Corp	Guayaquil.	.....	.....	.....	.....
January 28	Gloriana [4]	Carl K. McFadden	David.	.....	.....	.....	.....

* Other than ships passing through the Canal.

THE PANAMA CANAL RECORD

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CANAL BUSINESS IN 1920.

Summary of Traffic and Services During Record Year.

The traffic through the Canal during the calendar year 1920 exceeded that during any previous period of 12 months.

Prior to this the record period was the fiscal year from July 1, 1919, to June 30, 1920; and prior to that the record was in the calendar year 1919.

Traffic in the calendar year 1920 was made up of 2,814 ships in commercial service, paying tolls, and 221 vessels in the service of the United States Government, principally the Navy, passing through the Canal without the payment of tolls. The total was 3,035 ships, exclusive of vessels used in the Canal work and of launches.

As the ships passing through free are not in commercial use (though the 221 in 1920 carried a total of 364,050 tons of cargo, principally coal, fuel oil, and supplies), they will not be considered in the comparisons. Their passage constitutes a kind of extra service performed by the Canal, for which no tolls are paid and which is not a part of its usual commercial service.

The 2,814 commercial ships passing through the Canal in 1920 exceeded the number in the fiscal year ending June 30, 1920, by 13.6 per cent, and the number in the calendar year 1919 by 31.9 per cent.

The aggregate net tonnage of the 2,814 ships was 10,378,265 tons, Panama Canal measurement. They carried 11,236,119 tons of cargo. The tolls earned on them amounted to $10,295,362.21. In net tonnage, tolls, and cargo they were 21.4, 20.9, and 19.9 per cent greater, respectively, than in the past fiscal year. In comparison with the year 1919, the net tonnage, tolls, and cargo were respectively, 50, 47.2, and 50.5 per cent greater in 1920 than in the preceding calendar year.

Cargo Handled in Years of Operation.

Comparison of the cargo carried through the Canal in 1920 with that handled in previous calendar years is shown below:

Year.	Tons.
1914[1]	1,745,334
1915	4,894,134
1916	4,838,496
1917	7,427,680
1918	7,294,502
1919	7,468,167
1920	11,236,119

[1] In 4½ months, from opening of Canal on August 15, 1914, to end of calendar year 1914.

DISTRIBUTION OF COMMERCIAL TRAFFIC.

Of the commercial ships, 1,414 went from Atlantic to Pacific and 1,400 from Pacific to Atlantic.

The cargo handled by commercial ships from Atlantic to Pacific through the Canal amounted to 5,269,350 tons; and that from Pacific to Atlantic to 5,966,769 tons. The total was 11,236,119 tons.

As among areas between which cargo was shipped, the greatest traffic was from the west coast of South America to the east coast of the United States. It amounted to 1,447,849 tons, and was one-fourth of all the cargo passing through the Canal from Pacific to Atlantic and one-eighth of all the cargo handled through the Canal during the year.

The routing next in order in quantity of cargo was from the Atlantic Coast of the United States to the Far East (Japan, China, Philippines, Straits Settlements, etc.). It aggregated 1,350,273 tons, or 6.7 per cent less than the cargo from the west coast of South America to the United States. It was slightly over one-fourth of the total cargo from Atlantic to Pacific and slightly less than one-eighth of all the cargo passing through the Canal in both directions.

Third in order was the route from the west coast of South America to Europe. Over this there passed 1,062,702 tons. This was over one-sixth of all cargo from Pacific to Atlantic and over one-eleventh of all cargo handled through the Canal in the year.

Over each of these three routings there were handled more than 1,000,000 tons of cargo, in the one direction.

The fourth routing, in amount of cargo, was from the east coast of the United States to the west coast of South America, 893,393 tons. The fifth was from the west coast of the United States to Europe, 749,447 tons; and the sixth was from the Atlantic Coast of Mexico to the west coast of South America, 659,777 tons, principally fuel oil.

The number of vessels, their aggregate net tonnage, Panama Canal measurement, and the cargo they carried, traveling on the principal trade routes, are shown in the following tabulation:

Commercial Traffic Through the Panama Canal During Calendar Year 1920, by Trade Routes.

ATLANTIC TO PACIFIC.

Route.	Total number of vessels.	Panama Canal net tonnage.	Tons of cargo.	Percentage of cargo, Atlantic to Pacific.	Percentage of all cargo, both directions.
East coast of United States to west coast of South America	334	1,089,405	893,393	16.95	7,95
Cristobal to west coast of South America	189	290,174	114,445	2.17	1.02
East coast of United States to Far East	188	920,906	1,350,273	25.63	12.02
Europe to west coast of South America	131	483,529	259,921	4.93	2.31
United States coastwise	116	448,734	416,819	7.91	3.71
Mexico to west coast of South America	81	401,590	659,777	12.52	5.87
United States to Australasia	78	404,864	532,297	10.10	4.74
Europe to west coast of United States	65	289,675	110,401	2.09	.98
Europe to Australasia	51	339,019	310,876	5.90	2.77
Cristobal to west coast of Central America	24	15,212	15,102	.29	.13
Cristobal to west coast of United States	22	40,871	38,680	.73	.34
West Indies to west coast of South America	13	10,539	12	.....	.....
Mexico to west coast of United States	13	74,376	129,510	2.46	1.15
East coast of United States to west coast of Canada	13	61,091	92,371	1.75	.82
East coast of United States to Hawaii	13	64,216	99,813	1.89	.89
East coast of United States to Philippine Islands	8	36,826	55,144	1.05	.49
Miscellaneous trade routes	75	202,973	190,516	3.62	1.70
Totals	1,414	5,174,000	5,269,350	100.00	46.896

PACIFIC TO ATLANTIC.

Route.	Total number of vessels.	Panama Canal net tonnage.	Tons of cargo.	Percentage of cargo, Pacific to Atlantic.	Percentage of all cargo, both directions.
West coast of South America to east coast of United States	292	948,342	1,447,849	24.27	12.89
West coast of South America to Cristobal	198	317,070	251,451	4.21	2.24
West coast of South America to Europe	197	818,678	1,062,702	17.81	9.46
United States coastwise	122	528,004	644,833	10.81	5.74
West coast of United States to Europe	115	515,609	749,447	12.56	6.67
Australasia to Europe	75	529,338	459,527	7.70	4.09
West coast of South America to Mexico	73	368,994	3,186	.05	.03
Far East to east coast of United States	71	327,887	477,640	8.00	4.25
West coast of Canada to Europe	30	92.411	129,909	2.18	1.16

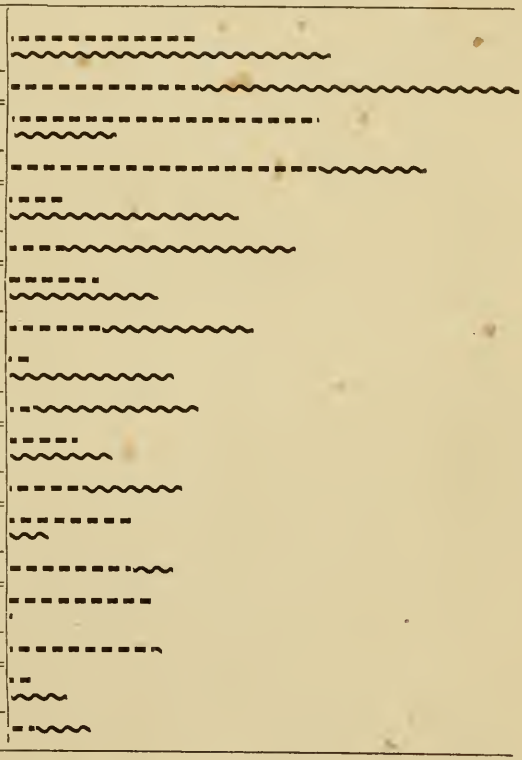
PACIFIC TO ATLANTIC—Continued.

Route.	Total number of vessels.	Panama Canal net tonnage.	Tons of cargo.	Percentage of cargo, Pacific to Atlantic.	Percentage of all cargo, both directions.
West coast of Central America to Cristobal	29	18,907	16,054	0.27	0.14
Australasia to United States	25	150,150	156,015	2.61	1.39
West coast of United States to Cristobal	22	40,020	21,435	.36	.19
West coast of United States to Mexico	22	114,193	6,000	.10	.05
West coast of South America to West Indies	15	28,495	46,542	.78	.41
Philippines to east coast of United States	10	45,439	72,350	1.21	.64
West coast of United States to Africa	9	41,934	60,476	1.01	.54
Hawaii to east coast of United States	4	15,439	24,262	.41	.22
Miscellaneous trade routes	91	303,355	337,091	5.65	3.00
Totals	1,400	5,204,265	5,966,769	100.00	53.103

The combined traffic of cargo in both directions between the principal areas is presented in the following graph:

Combined Cargo Movement in Both Directions over Nine Principal Trade Routes.

	Tons.
United States to South America	893,393
South America to United States	1,447,849
Total	2,341,242
United States to Far East	1,350,273
Far East to United States	477,640
Total	1,827,913
Europe to South America	259,921
South America to Europe	1,062,702
Total	1,322,623
U. S. coastwise, Atlantic to Pacific	416,819
U. S. coastwise, Pacific to Atlantic	644,833
Total	1,061,652
Europe to west coast of U. S.	110,401
West coast of U. S. to Europe	749,447
Total	859,848
Europe to Australasia	310,876
Australasia to Europe	459,527
Total	770,403
United States to Australasia	532,297
Australasia to United States	156,015
Total	688,312
Mexico to South America	659,777
South America to Mexico	3,186
Total	662,963
Cristobal to South America	114,445
South America to Cristobal	251,451
Total	365,896



Principal Commodities.

Of the 11,236,119 tons of cargo shipped through the Canal in the year 1920, 6,124,403 tons, or over one-half the total, were shipped in whole cargoes, the respective vessels containing only the one commodity at time of transit. Of the whole cargoes, 2,236,745 tons were from Atlantic to Pacific and 3,887,658 tons from Pacific to Atlantic. The shipments of commodities aggregating over 100,000 tons in shipload lots were as follows:

ATLANTIC TO PACIFIC.

Commodity.	Tons.
Fuel oil	828,223
Coal and coke	651,844
Refined oils	355,494
Steel and iron	157,405

PACIFIC TO ATLANTIC.

Nitrate	1,995,906
Flour	487,614
Cold storage products	347,479
Wheat	318,944
Lumber	205,172
Sugar	127,995

NATIONALITIES OF VESSELS.

Of the 2,814 commercial vessels using the Canal during 1920, the leading nationalities were as follows: The United States ships numbered 1,281, or 45.5 per cent of the total; the British ships numbered 867, or 30.8 per cent of the total; the Japanese, 122, or 5 per cent; Norwegian, 111, or 3.9 per cent. The numbers and tonnage of the ships, by nationalities, are summarized in this table:

Commercial Traffic Through the Panama Canal for the Calendar Year 1920, by Nationality of Vessels.

Registry.	No. of ships.	Tonnage.				Tolls.	Tons of cargo.[1]
		U. S. equivalent.	Panama Canal net.	Registered gross.	Registered net.		
Belgian	2	6,300	8,092	10,144	6,188	$7,886.25	12,700
Brazilian	1	5,436	6,294	6,692	4,126	6,795.00	8,916
British	867	2,707,826	3,333,676	4,242,357	2,649,963	3,357,357.55	3,305,681
Chilean	78	139,008	212,202	271,927	157,861	170,518.90	88,464
Chinese	4	10,564	12,008	16,645	10,624	13,187.10	14,400
Colombian	1	84	95	96	57	105.00	27
Costa Rican	13	2,055	2,201	2,331	1,624	2,392.65	1,641
Cuban	1	578	702	1,050	577	722.50	1,200
Danish	30	92,255	110,432	131,297	84,632	114,035.15	158,110
Dutch	33	121,403	164,361	181,276	115,547	150,715.18	139,258
French	53	139,219	152,690	203,642	135,623	161,527.04	132,149
German	32	87,344	114,727	137,814	84,855	107,004.83	125,455
Italian	31	97,031	120,544	170,370	102,235	121,304.65	89,835
Japanese	122	480,197	545,665	723,476	466,303	583,643.93	764,206
Jugo-Slav	2	3,902	4,503	6,370	4,038	4,877.50	8,325
Mexican	2	2,169	2,638	2,559	1,659	1,899.36	.....
Norwegian	111	366,719	433,389	573,895	356,998	411,422.03	486,889
Panaman	8	1,382	1,370	1,568	1,349	1,489.90	872
Peruvian	72	115,603	187,621	283,515	153,110	143,129.05	119,462
Portuguese	2	8,838	9,002	11,210	7,056	10,802.40	10,775
Russian	1	4,740	5,141	7,464	4,779	5,925.00	12,147
Swedish	18	51,743	75,454	78,698	57,918	63,511.25	92,893
Spanish	40	112,103	123,324	171,953	111,733	139,615.33	153,467
United States	1,281	3,986,755	4,747,036	6,056,518	3,939,415	4,721,494.66	5,509,247
Totals	2,814	8,543,498	10,378,265	13,300,837	8,458,491	$10,295,362.21	11,236,119

[1] 2,240 pounds to ton.

Record Traffic During January, 1921.

All previous records for traffic through the Canal were broken during the month of January, when 279 commercial and 79 noncommercial vessels transited the Canal. Of the above ships, 197 passed from the Atlantic to the Pacific and 161 from the Pacific to the Atlantic.

The number of commercial vessels, tonnage, tolls, etc., as compared with previous high records, are as follows:

	January.	Previous high record.	Date.
Number of vessels	279	266	August, 1920.
United States equivalent tonnage	894,689	832,742	September, 1920.
Panama Canal net tonnage	1,094,323	1,027,918	December, 1920.
Registered gross tonnage	1,383,778	1,298,864	December, 1920.
Registered net tonnage	880,362	823,758	December, 1920.
Tolls levied	$1,095,857.46	$1,010,150.63	September, 1920.
Tons of cargo carried	1,177,052	1,076,539	December, 1920.

Of the 79 noncommercial vessels, 60 were United States Navy ships, which were classified as follows: Battleships 9, cruiser 1, destroyers 19, supply vessels 10, mine sweepers 3, submarine chasers 4, submarines 7, submarine tender 1, repair ship 1, hospital ship 1, Navy tugs 3, Navy launch 1.

In addition to the above 60 Navy vessels there were 7 vessels under control of the United States Shipping Board passing through the Canal with fuel for the Navy.

Fish Caught in the Dry Dock at Balboa.

When the gates of the dry dock at Balboa are opened for the docking of a vessel a number of fish usually swim in; and when the dock is pumped out they are left stranded on the floor, as only small ones can go through the grating over the pump intakes. Those which are edible are usually gathered by the men at the dock, and the inedible ones are thrown out.

During a recent docking a school of fish swam in. When the dock was unwatered the floor was covered with them. In addition to those which the men took, and some 650 pounds taken by the Commissary Division, between 2 and 3 tons were dumped over the gates into the open sea. They were scooped into large buckets which were swung up and over the gates by a crane operating from the side wall of the dock. Most of them recovered and swam away. The Commissary Division realized 490 pounds of cleaned fish, which were sold as second-grade stock at 11 cents a pound.

Rebuilt "Marne" To Sail for New Orleans.

The Shipping Board steamship *Marne*, which was sunk in Cristobal Harbor by submarine fire last year in order to extinguish fire in her cargo of oil and gasoline, and later sunk again on account of the breaking out of another fire after she had been raised and was being discharged, is due to clear from Cristobal for New Orleans in a few days. She was rebuilt at the Balboa shops of The Panama Canal, under a blanket order to place her in the same condition as she was when built.

The *Marne* is a vessel of 6,869 gross and 4,885 net tons, 395.5 feet in length. She is the seventh large vessel to be rebuilt at Balboa shops, the others having been the American steamship *Cristobal*, 9,000 tons gross, and 5 former German liners.

Army Transports Bound for San Francisco.

The following cablegram has been received from the Washington Office of The Panama Canal under date of January 25:

"Referring to your cable of the 24th instant War Department advises informally no Army transport will transit Canal for San Francisco until about 2 months from now and not certain whether it will carry passengers has promised to notify us if one is placed in service."

United States Civil-Service Examinations.

Examinations for stenographer and typist, Panama Canal Service, will be held at Balboa Heights, C. Z., February 19, 1921. Details may be secured from the Civil Service Board, Balboa Heights.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama"; in the United States, "Pancanal, Washington."

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, February 5, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Athenic	29	13.55	30	6.13	30	13.40	30	14.45	British	Shaw, Saville & Albion Co.	500.0	63.0	27.1	London	Wellington	General	6,000	12,896	9,571
Miramar	28	14.55	30	6.30	30	15.11	30	16.16	Chilean	Sociedad Nac. de Boques	341.0	46.7	23.0	Norfolk	Arica	Coal	4,984	3,886	2,747
Laura C. Hall [1]	28	14.47	30	6.52	30	15.10	31	11.24	British	Pacific Metals Corporation	82.0	25.6	9.6	Cristobal	Buenaventura	General	12	130	69
Langton Hall	30	1.10	30	7.20	30	16.05	31	23.05	British	Hall Line, Ltd	404.0	54.0	25.6	New York	Auckland	General	8,400	7,340	5,554
Chicomoco	30	3.35	30	7.25	30	16.43	6	18.37	American	Barber Steamship Line (S. B.)	402.0	53.0	28.0	Norfolk	Cavite	Coal	8,081	6,577	4,925
Mina Brea	30	13.43	31	6.35	31	15.00	1	16.52	British	International Petroleum Co.	359.7	49.2	25.0	Puerto Lobos	Pisagua	Crude oil	5,060	4,437	2,684
Elzasier	30	11.26	31	6.37	31	14.24	31	15.55	American	Lloyd Royal Belge	400.0	52.0	21.9	Antwerp	Valparaiso	General	4,500	6,091	4,458
Wolverine State	30	16.47	31	10.20	31	17.38	1	20.26	American	Pacific Mail Steamship Co. (S. B.)	502.1	62.2	21.3	Baltimore	San Francisco	General	670	12,031	8,495
Peru [2]	31	10.47	31	10.57	31	18.45	31	19.40	Danish	East Asiatic Steamship Co.	425.3	55.2	15.0	Copenhagen	San Francisco	General	1,375	7,404	5,658
Imperoyal	31	11.47	31	12.05	31	.....	1	10.29	British	Imperial Oil Co.	249.5	43.7	15.0	Halifax	Talara	Ballast	.....	2,291	1,595
Guatemala	24	21.50	31	12.27	31	.....	1	1.25	British	Pacific Steam Navigation Co.	359.0	43.0	18.6	Cristobal	Valparaiso	General	1,964	4,210	2,744
Quilpue	30	8.15	1	10.37	1	17.35	1	21.44	British	Pacific Steam Navigation Co.	362.0	46.0	18.6	New York	Guayaquil	General	210	4,742	3,023
Australplain	31	14.13	1	6.25	1	13.49	1	14.52	British	Commonwealth Government	385.0	50.0	24.5	Nuevitas	Sydney	Sugar	5,800	4,966	3,655
Melville Dollar	1	16.40	2	6.40	2	13.55	2	14.55	British	Dollar Line	370.0	50.0	21.6	New York	Vancouver	General	3,200	5,153	3,938
Jason [3]	1	7.20	2	10.32	2	18.50	2	20.23	American	United States Navy	514.0	65.2	31.8	Philadelphia	Guam	General	7,277	.....	.....
Mexico Maru	2	10.41	2	11.27	2	20.02	2	21.24	Japanese	Osaka Shosen Kaisha	400.0	57.8	20.1	New Orleans	Los Angeles	Cotton, iron	1,920	6,067	4,230
Caroline Maru	2	17.35	3	6.47	3	14.27	3	18.35	Japanese	Kokusai Kisen Kaisha	345.0	48.0	23.2	Newport News	Mollendo	Coal	4,392	4,216	2,921
San Joaquin	3	3.35	3	7.18	3	16.17	3	18.07	Norwegian	W. Wilhelmsen	425.4	57.1	26.6	Tampico	San Pedro	Crude oil	9,600	7,059	5,076
Argyll	3	4.00	3	7.42	3	16.25	3	21.03	French	Compagnie de Boloe	320.0	40.7	24.6	Tampico	Santa Rosalia	Fuel oil	3,000	3,141	2,096
Santa Ana	2	22.43	3	11.50	3	18.40	3	19.37	American	W. R. Grace & Co.	360.0	52.0	26.6	New York	Valparaiso	General	3,340	5,776	4,081
Vireo [4]	4	6.55	4	8.39	4	16.05	.....	.....	American	United States Navy	180.0	35.6	.....	Guantanamo	Balboa	.....	.....	.....	.....
Bobolink [4]	4	6.58	4	8.39	4	16.11	.....	.....	American	United States Navy	180.0	35.6	.....	Guantanamo	Balboa	.....	.....	.....	.....
Suka [5]	4	7.00	4	8.41	4	16.02	.....	.....	American	United States Navy	149.3	30.0	.....	Guantanamo	Balboa	.....	.....	.....	.....
Chewink [4]	4	7.02	4	8.41	4	16.14	.....	.....	American	United States Navy	180.0	35.6	.....	Guantanamo	Balboa	.....	.....	.....	.....
Quail [4]	4	7.05	4	8.43	4	16.21	.....	.....	American	United States Navy	180.0	35.6	.....	Guantanamo	Balboa	.....	.....	.....	.....
Rail [4]	4	7.15	4	8.43	4	16.17	.....	.....	American	United States Navy	180.0	35.6	.....	Guantanamo	Balboa	.....	.....	.....	.....
Gudrun Maersk	4	2.30	4	10.48	4	18.35	4	20.10	Danish	A. P. Moller	362.0	51.0	26.0	Norfolk	Mejillones	Coal	6,585	4,961	3,477
Montemar	31	20.00	4	12.55	4	21.10	4	22.08	Chilean	National Steamship Co.	198.0	30.0	14.0	Rochester	Valparaiso	Cement	650	867	452
Jamaica	24	19.10	4	13.30	4	21.05	4	10.22	British	Pacific Steam Navigation Co.	220.0	34.0	12.0	Cristobal	Champerico	General	297	1,187	622
Urubamba	29	21.25	5	6.00	5	13.47	5	17.05	Peruvian	Peruvian Line	381.3	41.1	19.1	Cristobal	Callao	General	917	4,803	2,951
San Juan	25	16.50	5	6.09	5	13.47	5	19.00	American	Pacific Mail Steamship Co.	283.0	37.0	16.6	Cristobal	San Francisco	General	795	2,379	1,593
S. C. T. Dodd	4	20.37	5	6.23	5	16.19	7	10.44	American	Standard Oil Co.	426.0	57.0	27.6	Baton Rouge	Honolulu	Oil and gasoline	8,500	7,762	5,380
Matinicock	29	8.10	5	9.07	5	18.35	5	19.35	American	Standard Oil Co.	459.0	51.0	27.6	Tuxpan	Ioco, B. C.	Crude oil	10,000	8,171	6,379
Tredenham	5	8.32	5	9.40	5	18.45	5	19.53	British	Hain Steamship Co.	499.7	62.2	27.6	Norfolk	Wellington	Coal	9,900	.....	.....
Oriana	4	17.33	5	10.25	5	19.30	5	20.25	British	Pacific Steam Navigation Co.	465.0	56.0	22.6	Liverpool	Coronel	General	2,920	8,620	5,345
Belen Quezada [1]	5	1.55	5	12.05	5	20.28	6	16.30	Panaman	E. R. Clare	213.7	32.6	15.3	Savannah	Puntarenas	Coal, gasoline	1,500	1,143	930

[1] Motor schooner. [2] Motor ship. [3] Collier. [4] Mine sweeper. [5] Tug.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Betsy Bell	19	10.37	30	6.39	39	14.35	31	15.24	American	Williams, Dimond & Co. (S. B.)	402.6	53.2		Balboa	Norfolk	Ballast		6,566	4,790
Edward Pierce	29	18.30	30	7.47	30	16.00	30	17.25	American	Crowell & Thurlow	354.2	49.0	25.0	Iquique	Charleston	Nitrate	6,414	4,591	3,261
Sandpiper [4]	29	14.03	30	11.40	30	17.07			American	United States Navy	187.0	35.0		Balboa	Cristobal				
Lock City [6]			30		30				American	W. C. Hyler	30.2	8.4	2.0	Balboa	Gatun				
Golden Gate [7]	29	16.00	31	8.32	31	18.20	1	14.11	American	James Rolph	293.3	42.9	22.7	San Francisco	Runcorn	Barley	3,200	2,380	2,185
Manavi	31	18.00	1	7.09	1	14.30	6	9.50	British	Pacific Steam Navigation Co	216.0	35.1	15.0	Guayaquil	Cristobal	Produce	535	1,357	884
Booral	1	9.10	1	10.36	1	17.52	1	20.30	British	Commonwealth Government	385.0	50.1	18.0	Sydney	London	Cold storage	4,000	5,544	3,939
Viborg	1	10.30	1	11.57	1	20.20	1	22.03	Danish	C. K. Hansen	283.0	42.2	19.5	Iquique	Nykoebing	Nitrate	3,160	2,578	1,795
S. V. Harkness	10	2.50	1	13.14	1	20.32	1	22.54	American	Standard Oil Co	419.5	57.2	15.6	Antofagasta	Tampico	Ballast		7,443	5,545
Orbita	1	12.50	1	15.30	1	23.58	2	15.40	British	Pacific Steam Navigation Co	550.3	67.3	30.6	Talcahuano	Liverpool	General	6,512	16,822	11,508
Begona No. 1	1	13.30	2	6.36	2	16.30	2	16.30	Spanish	José de Urquijo	330.0	47.1	22.0	Caleta Colosa	Hampton Rds.	Nitrate	5,289	3,795	2,793
Potosi	1	16.25	2	6.41	2	16.20	3	8.49	British	Pacific Steam Navigation Co	381.0	49.0	24.9	Tocopilla	Europe	Nitrate of soda	5,819	5,567	4,296
Essequibo	2	1.15	2	7.59	2	17.15	3	10.51	British	Royal Mail Steam Packet Co	450.3	57.8	23.0	Valparaiso	New York	General	1,881	9,037	6,089
Santa Luisa	2	4.30	2	8.40	2	17.51	2	18.38	American	W. R. Grace & Co	360.2	51.6	24.0	Valparaiso	New York	Nitrate	4,150	5,694	3,975
Mexican	2	3.00	2	9.00	2	18.45	2	18.48	American	American-Hawaiian Line	472.3	57.2	25.0	Los Angeles	Philadelphia	Lumber, general	6,680	9,184	6,821
Putney	1	23.00	2	9.33	2	21.05	3	10.35	British	Britain Steamship Co	340.2	45.0	21.0	Taltal	Bilbao	Nitrate	4,700	3,504	2,576
Yalza	2	7.00	2	9.47	2	19.32	2	19.32	American	N. Atl. & West. S. S. Co. (S. B.)	400.7	54.2	23.1	San Francisco	Philadelphia	Lumber, general	7,196	6,529	4,737
Karen Rogenaes	2	7.50	2	11.01	2	21.10	3	12.08	Norwegian	N. Rogenaes	293.0	44.0	19.0	Tocopilla	New York	Copper, etc	3,434	2,666	1,643
Eretza Mendi	2	8.30	2	11.20	2	22.35	3	9.45	Spanish	Naviera Sota & Aznar	365.0	50.3	21.5	Caleta Colosa	Azores [9]	Nitrate	5,850	4,449	3,217
Ethelstan	2	9.35	2	11.29	2	21.30	3	1.57	British	Rhondda Merthyn S. S. Co	340.1	47.1	24.0	Caleta Buena	Azores [9]	Nitrate of soda	6,000	4,310	3,217
William E. Burham	1	19.30	2	13.20	2	23.02			American	Whitney & Bodden	190.9	38.4	16.8	Taltal	Matanzas	Nitrate	1,003	785	669
Acajutla	2	18.30	3	6.35	3	13.10	6	6.12	British	Pacific Steam Navigation Co	215.7	33.5	14.6	Tumaco	Cristobal	Coffee, hides, etc	592	1,273	706
Port Chalmers	2	23.45	3	7.47	3	16.00	3	18.25	British	Commonwealth and Dom. Line	450.3	55.3	23.0	Sydney	London	Frozen, general	5,151	8,313	5,902
Orient City	2	20.00	3	8.06	3	16.45	3	20.15	British	W. R. Smith & Sons	408.0	53.6	24.0	Portland	Hamburg	Wheat	8,400	5,682	4,229
Marne	(*)	13.43	3	8.30	3	17.42			American	U. S. & Australian S. S. Co. (S.B.)	395.0	55.0		Balboa	New Orleans	Ballast		7,277	5,170
Kaikoura	3	6.30	3	9.28	3	19.00	4	1.12	British	New Zealand Shipping Co	460.0	58.2	21.6	Wellington	London	General, meat	4,620	9,194	6,602
M. F. Ellicott	3	0.40	3	10.25	3	19.10	3	19.10	American	Standard Oil Co	425.8	57.0	27.6	Los Angeles	New York	Gas, oil	8,663		
Gold Star [8]	31	12.38	3	14.04					American	The Panama Canal	110.0	20.0		Balboa	Gatun Lake				
Salvador	4	0.01	4	6.34	4	15.00			British	Pacific Steam Navigation Co	215.0	33.0	12.8	Champerico	Cristobal	General	144	1,213	692
W. H. Libby	4	2.30	4	8.29	4	18.00	5	6.05	American	Standard Oil Co	462.4	60.2	20.0	Vancouver	Baton Rouge	Ballast			
Ballena	4	14.16	5	6.53	5	16.45	5	18.45	British	Pacific Steam Navigation Co	400.1	52.3	25.6	Valparaiso	Antwerp	Nitrate	7,300	5,816	4,413
Effingham	4	17.30	5	7.07	5	17.30	5	17.30	American	Williams, Dimond & Co. (S. B.)	402.6	54.8	27.0	Portland	Hamburg	General	7,378	6,932	5,181
Eurydamas	4	20.40	5	7.29	5	18.35	5	20.05	British	Alfred Holt & Co	410.0	49.3	25.8	San Francisco	London	General	6,900	5,718	4,189
Balboa	5	6.45	5	8.27	5	19.05	7	11.00	American	Colombian Maritime Co	190.0	29.1	13.6	Buenaventura	Cristobal	Coffee, fruits	406	741	350

[6] Launch. [7] Bark. [8] Steam launch. [9] For orders. * July 3, 1920. Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
January 30	Achilles [10]	Panama Railroad Steamship Line	Norfolk.	January 30	Caribbean	Panama Railroad Cattle Industry	Cartagena.
January 31	Cartago	United Fruit Co	New Orleans.	January 30	Mamei [11]	Panama Railroad Steamship Line	Norfolk.
February 2	Atenas	United Fruit Co	New Orleans and way-ports.	January 31	Gen. W. C. Gorgas	Panama Railroad Steamship Line	Colombian ports.
				January 31	Santa Leonora [12]	United States Army	New York and Porto Rico.

[10] And barge *Darien*. [11] Barge. [12] Transport.

(Continued on page 376, column 2.)

Official Circulars.

Fires in Dry Grass.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., January 27, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

During each dry season a number of fires occur in dry grass which has not been cut, and in many instances these fires are a serious menace to property of The Panama Canal and Panama Railroad Company. To avoid loss from such fires, heads of departments and divisions concerned are directed to see that the grass is cut back not less than 20 feet from any building or combustible material in their charge.

CHESTER HARDING,
Governor.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., February 1, 1921.

CIRCULAR No. 278:

Effective February 1, 1921, Mr. Walter R. Smith is designated an accountable official of The Panama Canal, *vice* Mr. L. J. Stapleton, and as such will account for all storehouse stock at the Cristobal Store.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
CHESTER HARDING,
Governor.

Property Accounts of Various Accountable Officials.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 31, 1921.

To all accountable officials—Effective February 1, nonexpendable invoices, transfer receipts, and other papers pertaining to property accounts of the following accountable officials will be mailed direct to them instead of to the Property Bureau as heretofore:

General Manager, Commissary Division, Cristobal,
Superintendent, Cattle Industry, Cristobal,
Superintendent, Atlantic Locks, Gatun,
Superintendent, Pacific Locks, Pedro Miguel,
Superintendent, Coaling Plant, Cristobal,
Superintendent, Ancon Hospital, Ancon,
Superintendent, Colon Hospital, Cristobal,
Superintendent, Corozal Hospital, Corozal,
Port Captain, Cristobal,
Port Captain, Balboa,
Pilot in Charge, Lighthouse Subdivision, Gatun.

Nonexpendable invoices, transfer receipts, and other papers pertaining to the property accounts of the Dredging and Mechanical Divisions and district quartermasters will be forwarded direct to them as heretofore.

Nonexpendable invoices, transfer receipts, and other papers pertaining to all other accountable officials will be forwarded to the Property Bureau as heretofore.

Transfer receipts covering expendable material will continue to be forwarded to the Property Bureau for all divisions except the Dredging and Mechanical Divisions and district quartermasters, as directed in my circular No. 204, dated June 30, 1919.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
CHESTER HARDING,
Governor.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 375.

PORT OF CRISTOBAL—continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
February 2	Gen. O. H. Ernst	Panama Railroad Steamship Line	Norfolk.
February 2	Carrillo	United Fruit Co.	New York via Kingston.
February 3	William N. Page	C. Curran & Bullitt	Norfolk.
February 3	Santa Marta	United Fruit Co.	Colombian ports.
February 4	Toloa	United Fruit Co.	New York via wayports.
February 4	Ottar	Jorgen C. Knudsen	Cartagena.
February 5	Patuca	Elders & Fyffes	Port Limon.
February 5	Stuyvesant	Royal Netherlands W. I. Mail	Amsterdam via wayports.

*DEPARTURES.

Date.	Vessel.	Line.	For—
February 2	Atenas	United Fruit Co.	New Orleans.
February 3	Achilles [10]	Panama Railroad Steamship Line	Norfolk.
February 3	Santa Marta	United Fruit Co.	New York via Kingston.
February 3	Cartago	United Fruit Co.	New Orleans via Bocas del Toro and Habana.
February 3	Panama	Panama Railroad Steamship Line	New York via Haiti.
February 3	Carrillo	United Fruit Co.	New York via Colombia and Kingston.
February 5	Patuca	Elders & Fyffes	Kingston.
February 5	Toloa	United Fruit Co.	New York via Port Limon and Habana.
February 5	Wm. N. Page	C. Curran & Bullitt	Norfolk.
February 5	Stuyvesant	Royal Netherlands W. I. Mail	Puerto Colombia.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—
February 1	Babinda [11]	Pacific Freighters	Valparaiso.
February 2	Lake Filbert	General Steamship Corp. (S. B.)	Huacho.

Date.	Vessel.	Line.	For—
February 1	Cethana [11]	Pacific Motorship Corporation	San Francisco.
February 3	Lake Filbert	General Steamship Corp. (S. B.)	San Francisco.
February 4	Babinda [11]	Pacific Freighters	San Francisco.

[11] Motor.

* Other than ships passing through the Canal.

THE PANAMA CANAL RECORD

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Volume XIV. Balboa Heights, C. Z., February 16, 1921. No. 27.

Departure of Governor Harding.

Brig.-Gen. Chester Harding, U. S. A. (retired), Governor of The Panama Canal for a 4-year term beginning January 11, 1917, left the Isthmus for the United States on February 10, with the expectation of not returning again as Governor. His successor is to be appointed by the President who will be inaugurated March 4. Col. Jay J. Morrow, Engineer of Maintenance, is Acting Governor until the appointment of Governor shall be made.

Governor Harding's connection with the Canal began on July 27, 1907, when he sailed for the Isthmus from New York on the steamship *Panama*. His service during the construction period was on Gatun locks and the spillway of Gatun Dam, and later in charge of the dredging and marine operations of the Atlantic Division. On February 28, 1913, he returned to the United States to take up duties as Engineer Commissioner of the District of Columbia. In November, 1914, he returned to the Canal Zone as Assistant to the Governor, and on January 1, 1915, he was appointed Engineer of Maintenance, serving in that capacity until his appointment as Governor. He was Governor throughout the period of the participation of the United States in the World War.

On the eve of his departure, Governor Harding at a farewell gathering expressed to the heads of departments and divisions, and through them to the employees, his deep appreciation of the loyal and spirited service which had been given to the Canal and the United States during his administration, and which has resulted in the high efficiency of the Canal, attributing this to the practical cooperation that exists among the employees, and between the employees and the supervisory officials.

Canal Traffic in January.

The Canal traffic for January, 1921, for commercial vessels, was classified as shown in the following tabulation. Traffic in January exceeded that during any previous month of Canal operation:

PACIFIC TO ATLANTIC.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From West Coast of South America to East Coast of United States:							*Long tons.*
United States	14	35,660	42,169	55,179	35,575	$41,672.50	54,131
British	6	15,283	19,553	24,958	14,761	19,003.10	14,787
Danish	2	3,451	3,990	4,946	3,067	4,203.65	7,263
Norwegian	2	1,873	2,261	2,960	1,758	1,943.38	1,350
Spanish	1	2,275	2,540	3,660	2,437	2,843.75	4,000
Totals	25	58,542	70,513	91,703	57,598	69,666.38	81,531

PACIFIC TO ATLANTIC—Continued.

Route and registry.	No. of vessels.	United States equivalent	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From West Coast of South America to Europe:							*Long tons.*
British	12	38,979	50,550	60,747	37,868	$48,601.30	75,269
Danish	3	7,319	10,243	11,614	7,324	9,148.75	17,833
Italian	2	5,981	7,882	10,603	6,416	7,476.25	6,970
Spanish	2	3,799	4,643	5,928	3,856	4,748.75	8,550
Dutch	1	4,384	6,807	6,944	4,414	5,480.00	10,000
French	1	4,326	4,363	5,923	3,763	5,235.60	6,000
United States	1	3,818	4,804	6,415	3,918	4,772.50	7,500
Norwegian	1	3,688	4,709	6,034	4,381	4,610.00	7,723
Peruvian	1	2,337	2,357	2,477	2,352	2,828.40	4,000
Totals	24	74,631	96,358	116,685	74,292	92,901.55	143,845
United States coastwise:							
United States	16	52,999	62,765	82,124	56,377	64,343.59	81,336
From West Coast of United States to Europe:							
United States	8	30,034	37,687	44,692	30,143	37,441.65	47,656
Dutch	3	13,022	15,206	18,922	13,041	16,065.70	24,441
British	2	13,315	15,151	21,341	13,338	16,643.75	20,553
Danish	1	4,244	5,318	6,637	4,236	5,305.00	8,290
Swedish	1	2,244	4,019	3,745	2,858	2,805.00	5,200
Totals	15	62,859	77,381	95,335	63,616	78,261.10	106,140
From Australia to Europe:							
British	14	81,498	101,145	126,119	79,698	101,445.90	88,358
From West Coast of South America to Cristobal:							
British	6	3,658	5,541	7,208	4,116	4,572.50	1,160
Peruvian	2	3,021	5,910	9,361	5,100	3,776.25	3,657
Chilean	1	1,463	2,577	2,553	1,600	1,828.75	352
United States	1	336	350	615	372	420.00	573
Totals	10	8,478	14,378	19,737	11,188	10,597.50	5,742
From Far East to East Coast of United States:							
British	3	9,537	11,709	13,526	8,798	10,741.39	11,884
Japanese	2	7,912	10,250	12,808	7,874	9,890.00	7,455
United States	1	4,477	4,884	6,164	4,630	5,596.25	5,700
Totals	6	21,926	26,843	32,498	21,302	26,227.64	25,039
From West Coast of South America to East Coast of Mexico:							
Norwegian	2	8,871	10,183	13,948	8,840	7,331.76	.....
United States	2	8,283	9,586	13,206	8,159	6,901.92	.....
British	2	7,206	8,026	11,415	7,079	5,778.72	.....
Totals	6	24,360	27,795	38,569	24,078	20,012.40	.....
From West Coast of Central America to Cristobal:							
British	4	2,886	3,111	5,003	2,935	5,682.90	387
Costa Rican	1	144	152	158	93	180.00	236
Totals	5	3,030	3,263	5,161	3,028	5,862.90	623
From West Coast of Canada to Europe:							
United States	2	8,567	9,946	12,364	8,469	10,708.75	11,952
British	2	6,830	9,006	10,940	6,750	8,537.50	14,408
Totals	4	15,397	18,952	23,304	15,219	19,246.25	26,360
From Australasia to East Coast of United States:							
United States	2	8,153	9,951	12,100	7,486	10,191.25	15,399
British	1	3,511	4,110	4,904	3,139	4,388.75	7,000
Totals	3	11,664	14,061	17,004	10,625	14,580.00	22,399
From West Coast of United States to Cristobal:							
United States	3	4,818	5,654	7,693	4,791	6,022.50	717
From Balboa, C. Z., to East Coast of United States:							
United States	2	9,765	11,720	17,141	9,722	8,438.40	.....
From Balboa, C. Z., to East Coast of Mexico:							
United States	1	4,694	5,400	7,641	4,678	3,888.00	.....
Norwegian	1	4,438	5,085	7,022	4,438	3,661.20	.....
Totals	2	9,132	10,485	14,663	9,116	7,549.20	.....
From West Coast of South America to West Indies:							
Norwegian	1	5,903	6,328	7,777	5,912	7,378.75	10,231
Japanese	1	2,953	3,397	4,359	2,709	3,691.25	6,422
Totals	2	8,856	9,725	12,136	8,621	11,070.00	16,653

PACIFIC TO ATLANTIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From West Coast of South America to Azore Islands:[1]							*Long tons.*
British	1	3,019	3,613	4,828	3,032	$3,773.75	7,500
Japanese	1	2,595	2,626	3,610	2,384	3,151.20	4,600
Totals	2	5,614	6,239	8,438	5,416	6,924.95	12,100
From West Coast of Central America to East Coast of United States:							
United States	2	2,013	2,231	3,132	1,947	1,860.72	589
From West Coast of South America to East Coast of Canada:							
United States	1	5,489	5,429	6,883	5,268	6,514.80	8,463
From West Coast of United States to East Coast of Mexico:							
United States	1	4,535	5,234	7,042	4,374	3,768.48	.....
From West Coast of Canada to East Coast of Mexico:							
United States	1	3,722	4,337	5,579	3,379	3,122.64	.....
Mexican coastwise ports:							
French	1	2,155	2,096	2,953	1,880	1,616.25	.....
Total commercial	.....	471,483	576,604	733,901	471,535	560,033.15	619,895
Total noncommercial	.....	6,340	6,506	43,885	6,265	5.25	.....
Grand totals	.....	477,823	583,110	777,786	477,800	560,038.40	619,895

[1] For orders.

ATLANTIC TO PACIFIC.

From East Coast of United States to West Coast of South America:							*Long tons.*
United States	7	14,792	18,812	24,698	14,921	$18,486.30	18,152
Norwegian	6	12,698	16,464	20,299	12,573	15,872.50	27,030
British	4	9,687	11,689	14,373	8,886	11,994.00	15,427
Danish	2	6,011	6,857	8,460	5,220	7,513.75	12,726
French	1	5,358	5,408	5,618	3,491	6,489.60	6,698
Japanese	1	3,607	4,590	4,956	3,500	4,508.75	6,381
Chilean	1	2,782	2,747	3,566	2,296	3,296.40	4,984
Spanish	1	1,916	2,637	3,030	1,918	2,395.00	4,773
Totals	23	56,851	69,204	85,000	52,805	70,556.30	96,171
United States coastwise:							
United States	17	73,112	88,086	108,842	71,494	91,390.00	76,593
From East Coast of United States to Far East:							
Japanese	5	17,048	19,393	26,172	16,861	21,175.50	27,633
United States	4	17,593	18,425	24,655	15,923	20,118.55	32,684
British	3	11,103	13,445	16,853	10,562	13,878.75	21,931
Totals	12	45,744	51,263	67,680	43,346	55,172.80	82,248
From East Coast of United States to Australasia:							
British	10	44,912	55,171	67,652	43,996	55,830.45	66,409
United States	1	3,415	4,730	5,535	3,415	4,268.75	6,000
Swedish	1	2,532	3,736	3,997	2,779	3,165.00	5,812
Totals	12	50,859	63,637	77,184	50,190	63,264.20	78,221
From Europe to West Coast of South America:							
British	6	19,854	24,170	30,894	19,790	24,817.50	16,725
Dutch	2	6,768	9,360	10,274	6,991	8,460.00	6,532
Spanish	1	3,914	3,994	4,804	3,490	2,935.50	.....
Italian	1	3,149	3,600	5,355	3,160	3,936.25	950
Swedish	1	2,248	4,089	3,267	2,865	2,810.00	1,735
Peruvian	1	1,204	2,386	4,403	2,090	1,505.00	2,139
Totals	12	37,137	47,599	58,997	38,386	44,464.25	28,081
From Cristobal to West Coast of South America:							
British	8	6,563	9,960	13,170	7,501	8,178.43	5,310
Peruvian	1	1,515	2,959	4,617	2,427	1,893.75	1,971
Chilean	1	1,463	2,577	2,553	1,600	1,828.75	400
United States	1	336	350	615	372	420.00	63
Totals	11	9,877	15,846	20,955	11,900	12,320.93	7,744
From Europe to West Coast of United States:							
Danish	2	9,454	10,961	12,220	7,721	10,350.66	1,400
United States	2	7,454	9,458	12,032	7,454	9,317.50	4,896
Dutch	1	4,863	6,066	6,755	4,799	6,078.75	2,393
Norwegian	1	4,523	5,627	7,093	4,479	5,653.75	4,833
British	1	3,648	5,437	5,904	3,678	4,560.00	1,770
Totals	7	29,942	37,549	44,004	28,131	35,960.66	15,292

ATLANTIC TO PACIFIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From Mexico to West Coast of South America:							*Long tons.*
United States	3	12,939	16,112	21,100	12,808	$16,173.75	28,170
Norwegian	2	8,862	10,193	13,983	8,856	11,077.50	18,700
British	2	7,206	8,026	11,415	7,079	9,007.50	15,060
Totals	7	29,007	34,331	46,498	28,743	36,258.75	61,930
From West Indies to West Coast of South America:							
Chilean	6	[1] 2,538	[1] 2,286	(1) (2)	(1) (2)	20,524.20	2,500
From Europe to Australasia:							
British	5	25,689	30,946	40,757	25,384	32,111.25	26,715
From Mexico to West Coast of United States:							
United States	2	9,492	10,785	14,218	9,094	11,865.00	20,000
British	1	4,325	4,963	6,533	4,178	5,406.25	9,000
Totals	3	13,817	15,748	20.751	13,272	17,271.25	29,000
From Europe to West Coast of Canada:							
British	2	7,207	9,994	11,401	7,056	7,195.68	.....
French	1	2,264	2,933	3,563	2,293	2,830.00	5,075
Totals	3	9,471	12,927	14,964	9,349	10,025.68	5,075
From Cristobal to West Coast of Central America:							
British	2	1,264	1,314	2,266	1,252	1,558.90	1,085
Costa Rican	1	144	152	158	93	109.44	.....
Totals	3	1,408	1,466	2,424	1,345	1,668.34	1,085
From Mexico to Balboa, C. Z.:							
United States	1	4,694	5,400	7,641	4,678	5,867.50	10,000
Norwegian	1	4,438	5,085	7,022	4,438	5,547.50	9,900
Totals	2	9,132	10,485	14,663	9,116	11,415.00	19,900
From Cristobal to West Coast of United States:							
United States	2	3,486	4,061	5,540	3,482	4,357.50	3,013
From West Indies to West Coast of United States:							
United States	1	3,537	4,901	5,657	3,537	4,421.25	1,566
British	1	3,229	3,783	4,806	3,007	2,723.76	.....
Totals	2	6,766	8,684	10,463	6,544	7,145.01	1,566
From East Coast of United States to Balboa, C. Z.:							
United States	1	5,986	6,930	11.081	5,970	7,482.50	11,998
From East Coast of United States to Philippines:							
United States	1	3,776	4,819	6,053	3,757	4,720.00	6,912
From East Coast of South America to West Coast of United States:							
United States	1	3,522	4,914	5,652	3,522	4,402.50	2,367
Foreign ship in ballast between United States coastwise ports:							
Norwegian	1	2,733	4,253	4,342	2,726	3,047.04	.....
East Coast of Canada to West Coast of South America:							
British	1	1,390	1,595	2,253	1,384	1,148.40	.....
From Europe to West Coast of Central America:							
British	1	791	918	1,561	809	988.75	747
From East Coast of United States to Society Islands:							
United States	1	172	172	213	172	129.00	.....
Grand totals	.....	423,206	517,719	649,877	411,827	535,824.31	557,158

[1] Displacement tonnage of 35,562 not included. (Five vessels of Chilean Navy.)
[2] Registered gross and net tonnage unavailable for the ship on which the United States equivalent and Panama Canal net tonnages are shown.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama"; in the United States, "Pancanal, Washington."

Return of the Fleets.

The train of the United States battle fleet (combined Atlantic and Pacific fleets) returned from southern waters to Balboa on February 11, and the Atlantic and Pacific fleets arrived from Callao and Valparaiso, respectively, in the morning of February 14. The flagships *Pennsylvania* and *New Mexico* tied up at dock; the hospital ship *Solace* moored in the inner harbor; the *Birmingham*, *Melville*, and *Black Hawk* are at moorings; the destroyers are to tie up at moorings north of Pier 18 as soon as they are fueled; the anchorage for the remainder of the fleet is in the outer harbor.

The two fleets are to be at Balboa until February 23. Shore liberty is to be granted, a series of entertainments have been arranged, and the Commander-in-Chief has published the following schedule of inter-fleet athletics:

ATLANTIC FLEET VS. PACIFIC FLEET.
February 15 to February 23, 1921.

Tuesday, February 15—Fleet arrives.
Wednesday, February 16, 2 p. m.—Fleet boxing and wrestling championship.
Thursday, February 17, 2 p. m.—Baseball, enlisted men.
Friday, February 18, 2 p. m.—Baseball, enlisted men.
Saturday, February 19, 2 p. m.—Baseball, enlisted men (if necessary).
Sunday, February 20, 2.30 p. m.—Free-for-all sailing race.
Monday, February 21, 7.30 a. m.—Fleet challenge cup race.
8.30 a. m.—Whaleboat pulling race.
2.00 p. m.—Baseball, officers' team.
Tuesday, February 22, 10 a. m.—Presentation of trophies by Commander-in-Chief.
Wednesday, February 23—Fleet leaves.

Two New "State" Liners Due Same Day.

The steamship *Golden State*, operated by the Pacific Mail Steamship Company, and the *Hawkeye State*, operated by the Matson Navigation Company, both 535-foot ships of the United States Shipping Board, are scheduled to reach Cristobal on February 22. Both are on their maiden voyages, and both are following the same course from Baltimore to San Francisco, via Habana and the Canal. They are carrying a total of over 500 first-class passengers.

"Swiftsure" the First of a Group of Seven Oil Tankers.

The steamship *Swiftsure*, which passed through the Canal in ballast on February 6, bound from San Francisco to Tampico, is stated to be the first of 7 oil tankers built in San Francisco for the Swiftsure Oil Transportation Company for use in the trade between Tampico and New York. The other vessels, as completed, are to come through the Canal and take places on the Tampico-New York run.

The *Swiftsure* is a vessel of 8,207 gross and 5,091 net tons, 465 feet in length by 60 feet beam.

United States Transport Company Line in Coastwise Service.

The United States Transport Company, Inc., has announced the establishment of a steamship line in the United States coastwise service. Vessels are to ply between New York, Philadelphia, and Baltimore, on the Atlantic, and Los Angeles, San Francisco, and Seattle, on the Pacific, with sailings every two months. The first vessel in the service is the *C. H. Livingstone*, now due at the Canal from the Atlantic ports of the line. She is to be followed by the *C. C. Morse*, sailing about 3 weeks later.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, February 12, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Caribbean	3	13.33	6	6.10	6	14.24			American	Panama Railroad Cattle Industry	288.0	47.6	15.0	Cartagena	Balboa	Ballast		2,354	478
Spain Maru	5	19.12	6	6.37	6	14.35	6	15.25	Japanese	Kawaski Kisen Kaisha	385.0	51.0	26.0	Newport News	Coquimbo	Coal	7,181	5,924	4,392
Crosby Hall	5	18.50	6	6.46	6	15.25	6	16.30	British	Ellerman Lines	364.0	46.0	24.7	Glasgow	Auckland	General	7,080	4,288	3,139
Honolulu Maru	6	12.50	6	7.18	6	16.03	6	17.14	Japanese	Osaka Shosen Kaisha	497.3	50.0	26.6	New York	Hongkong	General	6,200	6,250	4,350
Wawalona	6	12.27	6	7.40	6	17.22	7	11.00	American	Pacific Steamship Co. (S. B.)	401.0	53.2	26.7	Norfolk	Pearl Harbor	Coal	8,400	6,611	4,793
Manavi	1	14.30	6	9.50	6	17.50	7	1.50	British	Pacific Steam Navigation Co	216.0	35.0	11.6	Cristobal	Guayaquil	Ballast		1,357	884
Patriot [1]	6	17.32	7	6.09	7	12.31	8	17.35	British	Canadian Government	266.0	27.6	10.0	Trinidad	Corinto				
Patrician [1]	6	17.43	7	6.12	7	12.36	8	17.35	British	Canadian Government	266.0	27.6	12.4	Trinidad	Corinto				
Ebro	6	7.35	7	6.30	7	14.15	7	17.20	British	Pacific Steam Navigation Co	450.0	57.0	25.6	New York	Valparaiso	General	3,086	9,089	6,215
Haughland	6	16.20	7	6.43	7	16.59	8	18.53	Norwegian	Rogenaes	325.0	47.0	21.0	Norfolk	Mejillones	Coal	3,649	3,386	2,235
Rio Grande	6	18.09	7	8.00	7	15.38	7	16.25	Norwegian	Nordenfildske Steamship Co	360.0	52.0	17.0	Baltimore	San Francisco	Ballast		5,137	3,767
Benowa	7	8.15	7	9.05	7	22.58	8	18.53	American	Pacific Mail Steamship Co	268.0	48.0	26.0	Norfolk	Bremerton	Coal	3,850	3,159	2,472
Arabian	6	19.48	7	9.30	7	18.19	8	0.20	Danish	Oriant Steamship Co	385.0	53.0	28.6	Newport News	Valparaiso	Coal	7,367	6,008	4,665
Balboa	5	19.05	7	11.00	7	19.32	8	0.20	American	Colombian Maritime Co	190.0	29.0	11.6	Cristobal	Buenaventura	Ballast		741	350
Aurora [2]	6	17.14	7	11.40	7	19.34	8	17.47	British	Canadian Government	436.0	39.0	16.0	Trinidad	Corinto				
Singapore Maru	7	8.25	8	6.38	8	14.50	10	11.31	Japanese	Kokusai Kisen Kabushiki Kaisha	385.0	51.0	26.8	Pensacola	Auckland	Case oil	8,000	5,914	4,389
Sherman	7	20.50	8	6.45	8	14.20	8	16.90	American	Sherman Steamship Co	400.0	45.0	25.0	Baltimore	Antofagasta	Structural iron	4,186	5,037	3,492
Los Angeles	8	6.20	8	8.02	8	16.06	9	1.13	American	Union Oil Co	435.0	56.0	30.0	Puerto Lobos	Los Angeles	Oil	11,000	7,390	5,195
Herakles	8	7.28	8	9.45	8	17.39	8	18.53	Norwegian	Bruusgaard Kiosterud	390.0	54.0	25.0	Jacksonville	Arica	Coal	7,078	5,680	4,220
Angelo Toso	7	16.38	8	10.48	8	18.45	9	23.58	Italian	Loriera Haviale	399.0	52.5	19.1	Genoa	Valparaiso	General	1,800	6,379	4,659
Faxen	8	18.06	9	6.24	9	14.00	9	15.22	Swedish	Trans.-Atlantic Steamship Co	353.0	50.7	22.1	Galveston	Sydney	Sulphur	5,500	4,404	2,807
Frederick Luckenbach	8	14.51	9	6.35	9	14.45	9	16.48	American	Luckenbach Line	317.5	49.2	21.1	Philadelphia	San Francisco	General	3,500	2,986	2,091
Saint Louis	4	23.05	9	6.55	9	15.31	10	17.10	French	French Line	396.0	49.2	23.0	Hamburg	Valparaiso	General	2,500	5,857	4,166
Elkridge	9	3.30	9	8.06	9	16.27	9	17.28	American	Pacific Mail Steamship Co. (S.B.)	402.0	55.0	26.0	Newport News	Tiburon	Coal	8,256	6,928	5,102
Ruapehu	8	17.55	9	9.15	9	17.28	9	18.28	British	New Zealand Shipping Co	457.0	58.0	23.1	London	Dunedin	General	4,195	9,009	6,779
Alsace	9	6.35	9	10.17	9	18.32	9	19.36	French	A. D. Bordes	400.0	52.0	18.0	Newport News	Iquique	Ballast		5,879	4,156
Eagle	9	7.25	9	10.45	9	20.05	9	21.07	American	Standard Oil Co	410.0	56.0	28.0	Norfolk	San Diego	Coal	8,354	8,243	6,266
D. G. Schofield	9	9.40	9	11.22	9	20.38	9	22.45	American	Standard Oil Co	439.0	58.0	27.0	Tampico	San Francisco	Oil	10,000	8,912	6,254
Milan Maru	9	12.07	9	12.32	9	21.25	10	1.47	Japanese	Kokusai Kisen Kabushiki Kaisha	400.0	53.0	26.6	Newport News	San Antonio	Coal	6,955	5,886	4,303
Baarn	8	12.25	9	12.58	10	11.10	10	21.09	Dutch	Royal Netherlands W. I. Mail	400.0	52.0	18.0	Amsterdam	Antofagasta	General	2,465	6,982	5,466
Benjamin Brewster	10	3.50	10	7.34	10	20.55	11	5.40	American	Standard Oil Co	411.6	53.4	28.6	Turpan	Pisagua	Crude oil	7,000	6,360	4,337
Waimate	9	21.55	10	10.19	10	17.45	10	18.46	British	New Zealand Shipping Co	420.0	54.0	27.0	Avonmouth	Auckland	General	4,833	7,198	5,425
Point Judith	9	16.02	10	11.16	10	18.45	11	2.20	American	Pacific Mail Steamship Co	289.0	44.0	17.6	Baltimore	San Francisco	General mdse	2,234		
Kinderdijk	10	9.09	10	11.55	10	19.48	10	9.09	Dutch	Holland-American Line	469.0	58.0	17.0	Hamburg	Los Angeles	General	750	8,515	6,068

[1] H. M. S. destroyer.

[2] H. M. S. cruiser.

City of Dunkirk	10	8.14	11	6.30	11	13.47	11	15.08	British	Ellerman Hall Line	420.0	54.0	27.0	New York	Yokohama	General	8,028	7,094	5,385
Alaskan	11	2.10	11	6.52	11	14.44	11	15.58	American	United American Line	470.0	57.0	20.0	New York	Los Angeles	General	2,200		
Belridge	11	4.31	11	7.10	11	15.52	11	18.20	Norwegian	W. Wilhelmsen	425.0	57.0	26.0	Puerto Lobos	Tocopilla	Crude oil	9,250		
J. W. Clise [3]	9	17.15	11	7.50	11	17.14	12	8.30	Norwegian	H. C. Hansen & V. Holm	188.7	40.3	11.0	Barbados	Port Townsend	Ballast		826	700
Magellan	10	15.06	11	11.17	11	20.20	12	3.30	British	Pacific Steam Navigation Co	485.0	59.0	25.3	London	Coronel	General	6,200	8,786	6,074
Salvador	4	15.00	11	11.36	11	19.19	11	20.18	British	Pacific Steam Navigation Co	215.0	33.0	13.0	Cristobal	Champerico	General	704	1,213	692
Ensley City	11	7.09	11	13.06	11	21.16	11	22.07	American	Isthmian Shipping Line	400.0	50.0	28.0	New Orleans	Yokohama	General	7,662	7,285	5,256
Sapelo	11	16.41	12	6.20	12	14.08			American	United States Navy	461.6	60.0	27.0	Port Arthur	Balboa	Fuel oil	10,000		
Everest	12	7.20	12	7.50	12	15.48	12	17.00	British	J. E. Murrell & Son	289.0	42.0	18.6	Philadelphia	Valparaiso	Coal	2,182		
West Togus	12	9.25	12	9.53	12	17.14	12	18.15	American	North Atl. & Western Co. (S. B.)	421.0	54.0	17.5	Portland, Me.	Portland, Oreg.	General	1,620	6,589	4,838
H. M. Flagler	12	11.30	12	12.10	12	20.37	13	23.20	American	Standard Oil Co	462.0	60.0	27.6	Tuxpan	Pisagua	Crude oil	10,369	8,606	6,525

[3] Schooner.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Maudie	5	20.45	6	8.11	6	15.16	6	16.47	Norwegian	N. Bugge	385.1	52.0	24.0	Taltal	Azores [8]	Nitrate	7,009	5,179	3,649
Aroostook [4]	1-16	11.10	6	10.06	7	17.18	13	10.15	American	United States Navy	489.0	52.0		San Diego	Cristobal				
Swiftsure	6	7.00	6	11.31	6	19.20	8	16.50	American	Swiftsure Oil Transport Co	464.6	64.2	20.0	San Francisco	Tampico	Ballast			
City of Sherman	1-31	4.00	6	13.44	6	21.42	6	21.42	American	Hasler Bros. & Co	400.7	54.2	25.6	Antofagasta	St. Thomas	Nitrate	7,800	6,530	4,708
Eldorado	6	13.06	6	13.50	6	22.25	7	8.55	American	Western Transport Co	245.6	42.0	18.0	San Francisco	New Orleans	General	1,800	2,439	1,671
Cauca	7	9.45	7	11.45	7	18.00	13	6.15	British	Pacific Steam Navigation Co	246.0	35.2	12.8	Guayaquil	Cristobal	Cocoa and gen	500	1,582	1,023
Vaidez	7	4.00	7	12.33	7	20.27	7	20.27	American	Alaska Steamship Co	244.0	43.2	18.6	Portland	Mobile	Flour	2,460	2,544	1,927
Wandilla	7	9.53	7	12.40	7	20.35	8	15.35	British	Adelaide Steamship Co	411.3	56.7	23.3	Sydney	New York	Wool and general			
Urko Mendi	7	19.55	8	8.09	8	16.10	8	16.10	Spanish	Sota & Aznar	331.0	44.5	23.6	Mejillones	Azores [8]	Nitrate	5,130	3,857	3,701
Point Bonita	7	23.46	8	14.06	8	22.16	9	20.20	American	Pacific Mail Steamship Co	289.0	44.1	14.3	San Francisco	Batlimore	General	1,466	2,895	1,993
General H. F. Hodges	9	5.00	9	7.45	9	19.00	12	12.10	American	Panama Railroad Steamship Line	323.5	39.0	20.0	Buenaventura	New York	General	1,727	4,503	2,764
Ortega	9	4.40	9	8.13	9	19.50	10	8.10	British	Pacific Steam Navigation Co	465.3	56.3	26.4	Talcahuano	Liverpool	General	4,925	8,345	4,998
Crampton Anderson	8	23.10	9	8.32	9	20.34	9	20.53	American	Pan.-Amer. Petroleum Transport	435.0	56.0	22.0	San Francisco	Tampico	Ballast			
Daybreak	8	19.15	9	9.32	9	21.22	9	23.10	British	Claymore Shipping Co	331.0	46.8	14.0	Talcahuano	Port of Mexico	Wood ballast	230	3,688	2,437
Ansaldo San Giorgio I	7	4.00	9	9.54	9	21.33	9	21.33	Italian	Soc. Nazionale di Nav	385.6	49.0	16.0	Iquique	Genoa	General	100	5,864	4,266
Argosy	8	20.03	9	12.34	9	22.12	9	22.35	American	Wessel Duval	390.0	54.2	24.6	Antofagasta	Savannah	Nitrate	7,200	6,161	4,433
Stanley Dollar	9	13.50	9	14.31	9	23.20	10	2.48	American	Dollar Line	288.8	44.6	20.0	San Francisco	New York	General, lumber	2,400	3,460	2,404
Buenos Aires [5]	9	9.00	9	15.12	9	23.58	10	12.30	Swedish	Johnson Line	440.0	56.0	27.0	San Francisco	New York	Grain, fruit, flour	7,730		
Eastern Ocean	9	14.36	10	6.53	10	16.31	10	17.30	American	E. C. Evans & Son	385.3	51.2	26.8	Portland	St. Thomas	Wheat	7,319	6,224	4,465
Acme	10	9.20	10	10.53	10	18.23	11	7.09	American	Standard Oil Co	435.0	56.0	27.0	Cebu	New York	Coconut oil	8,020	7,405	5,166
Sciota [6]			10	9.21	10	16.25			American	United States Navy	155.0	30.0	16.6	Balboa	Cristobal				
General G. W. Getty			10	11.50	10				American	United States Army				Balboa	Gatun				
Newport	10	7.30	11	6.42	11	17.30			American	Pacific Mail Steamship Co	326.0	38.2	5.0	San Francisco	Cristobal	General	205	3,173	2,163
Julia Luckenbach	11	6.45	11	8.40	11	18.15	11	18.15	American	Luckenbach Line	436.6	57.2	0.0	San Francisco	New York	General, lumber	10,300	8,543	6,427
Mosella	11	7.30	11	8.57	11	19.40	12	12.55	American	McCormick & McPherson	402.5	53.0	6.6	Portland	Emden	Wheat	7,585	6,580	4,894
Nevada	10	17.20	11	13.07	11	20.15	13	11.40	American	Pere Marquette Line	212.0	42.0	6.0	San Francisco	Norfolk	Ballast			
Bratsberg	11	12.00	11	14.08	11	21.55	12	12.10	Norwegian	Borgstad Co	345.9	49.6	0.2	Antofagasta	New York	Copper	4,063	4,263	3,042
Bath [7]	11	13.00	12	6.42	12	16.50			American	United States Navy	329.2	46.2	7.0	San Diego	Norfolk	General	1,802	3,945	2,564
Jason	10	23.15	12	6.47	12	17.00			Dutch	Royal Netherland Steamship Co	346.7	48.5	1.0	Taltal	Dunkirk	Nitrate	4,651	4,321	3,120

[4] Air craft tender. [5] Motor ship. [6] Tug. [7] N. T. S. [8] For orders. Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
Feb. 5	Metapan	United Fruit Co.	New Orleans and way-ports.	Feb. 6	Gen. O. H. Ernst	Panama Railroad Steamship Line.	Baltimore.
Feb. 6	Gen. W. C. Gorgas	Panama Railroad Steamship Line.	Colombian ports.	Feb. 6	Ottar	Jorgen C. Knudsen	Kingston.
Feb. 7	Allianca	Panama Railroad Steamship Line.	New York via Haiti.	Feb. 8	Metapan	United Fruit Co.	New Orleans, Bocas del Toro, and Habana.
Feb. 7	Harding	United States Navy	High seas.	Feb. 8	Gen. W. C. Gorgas	Pannma Railroad Steamship Line.	New York via Haiti.
Feb. 8	Redwing [9]	United States Navy	Norfolk.	Feb. 9	Deepwater	Castner, Curran & Bullitt	Norfolk.
Feb. 8	Heredia	United Fruit Co.	New Orleans.	Feb. 10	Redwing [6]	United States Navy	Norfolk.
Feb. 8	Deepwater	Castner Curran & Bullitt	Norfolk.	Feb. 10	Allianca	Panama Railroad Steamship Line.	Colombian ports.
Feb. 9	Cristobal	Panama Railroad Steamship Line.	Norfolk.	Feb. 10	Heredia	United Fruit Co.	New Orleans via Bocas del Toro, and Habana.
Feb. 9	Nessian	Leyland Line	Liverpool via wayports.	Feb. 10	De Soto	Standard Oil Co.	Mata Redondo.
Feb. 10	Ancon	Panama Railroad Steamship Line.	Norfolk.	Feb. 11	Nessian	Leyland Line	Galveston.
Feb. 8	De Soto	Standard Oil Co.	New York.	Feb. 12	Calamares	United Fruit Co.	New York via Limon and Habana.
Feb. 11	Calamares	United Fruit Co.	New York via wayports.	Feb. 12	Cristobal	Panama Railroad Steamship Line.	Norfolk.
Feb. 12	Colon	Panama Railroad Steamship Line.	New York via Haiti.	Feb. 12	San Mateo	United Fruit Co.	Boston, Mass.
Feb. 12	San Mateo	United Fruit Co.	Port Limon.				
Feb. 12	Haiti	French Line	Bordeaux via wayports.				
Feb. 12	Lake Franconia	United States Shipping Board	Manzanillo.				
Feb. 12	Eagle No. 4	United States Navy	High seas.				

[9] Tug and barges.

PORT OF BALBOA.

Feb. 10	Denver [10]	United States Navy	Mare Island.	Feb. 11	Dolphin	United States Navy	Corinto.
Feb. 11	William Jones [11]	United States Navy	San Diego.				

[10] Cruiser. [11] Destroyer 308. *Other than ships passing through the Canal.

Executive Order.[1]

Amendment of Executive Order of April 16, 1914,[2] so as to include mints and assay offices and Federal Reserve banks to which the duties and functions of Assistant Treasurers of the United States are transferred by the Secretary of the Treasury under the Act of May 29, 1920.

By virtue of authority vested in me under The Panama Canal Act, Executive Order dated April 16, 1914, prescribing regulations relative to the payment of tolls and bills for materials, supplies, repairs, harbor pilotage, towage, and other services, furnished to vessels by the Panama Canal, shall be and the same is hereby amended by inserting after the words "Assistant Treasurer of the United States" wherever these words occur in that Executive Order, the words "or any mint, assay office, or Federal Reserve bank to which the duties and functions of Assistant Treasurers may be transferred by the Secretary of the Treasury under the authority conferred upon him by the Act of May 29, 1920 (41 Statutes at Large, 655)."

WOODROW WILSON

THE WHITE HOUSE,
5 Jan'y, 1921.

[No. 3382.]

[1] Published as Panama Canal circular No. 601-116.
[2] Published as Panama Canal circular No. 601.

Addition to Tariff No. 4.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., February 4, 1921.

To all concerned—The following addition is made to Tariff No. 4—Schedule of Rates for Supplies and Services furnished to Shipping and Allied Interests at the Panama Canal:

ITEM 33.—HOTEL TIVOLI.

(Effective January 26, 1921.)

	One person.	Two persons.
Tivoli Annex, House No. 438, nonemployees, per day.....	$2.50	$4.00

CHESTER HARDING,
Governor, The Panama Canal.
President, Panama Railroad Company.

(NOTE—The above addition will be included in Supplement No. 4 to Tariff No. 4, when this supplement is issued.)

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the two weeks ended February 12:

Launch *Captain Wilhelm*, hull repairs and installation of new engine; tug *Bohio*, general repairs and rebuilding; launch *Santa Rita*, rebuilding; barges *Nos. 132*, *134*, and *135*, general repairs; mine yawl *No. 101*, hull repairs and overhauling of engine; subchaser *284*, docking and miscellaneous repairs; U. S. S. *Dolphin*, small miscellaneous repairs; steamship *Sussex*, docking, staging, cleaning, painting, and heavy hull repairs; tender *Perico*, docking, staging, cleaning, painting, and miscellaneous repairs; U. S. tug *Ontario*, miscellaneous steam engineering repairs; U. S. S. *Sciota*, minor repairs; motor ship *Cethana*, miscellaneous boiler repairs; steamship *Marne*, general repairs and rebuilding; U. S. S. *Carrabasset*, repairs to boilers and refrigerating system; U. S. S. *Mugford*, repairs to condensers; U. S. S. *Contocook*, miscellaneous minor repairs; steamship *City of Sherman*, repairs to boilers, main turbine. refrigerating system, and condenser; launch *Pilot*, general repairs; steamship *General G. W. Getty*, boiler repairs; U. S. yacht *Gold Star*, repairs to blower engine; steamships *S. V. Harkness*, miscellaneous heavy repairs; *Wolverine State*, turning chain and services of diver; *Imperoyal*, repairs to feed pumps; *Chicomico*, miscellaneous minor repairs; *Jalapa*, repairs to whistle; *Langton Hall*, repairs to cattle pen; *Mina Brea*, repairs to support; U. S. S. *Tacoma*, miscellaneous pipe work and repairs to ice machine; U. S. S. *Vireo*, repairs to refrigerating system; U. S. S. *Sonoma*, repairs to railing: U. S. S. *Iuka*, repairs to ice box; steamships *St. Louis*, repairs to anchor windlass; *Caribbean*, general repairs; *Angelo Toso*, shipping anchor.

The following vessels were at the Cristobal shops for repairs during the two weeks ended February 14:

Steamships *General O. H. Ernst*, and *Allianca*, miscellaneous repairs and painting to engine, deck, and steward departments; *Ebro*, repair hydraulic cranes; *St. Louis*, manufacturing 1 copper pipe as sample; *Salvador*, install 1 gear and pinion on deck winch; *Stuyvesant*, remetal brasses, repair old water pipes from ice cooler, etc.; U. S. S. *Sandpiper*, furnish new crosspiece for anchor engine as per sample; steamships *Marne*, clean bilges, install discharge valve from ice water pump; repair steam end of ammonia compressor, etc.; *Potosi*, minor repairs; *Cristobal*, *Ancon*, *Colon*, and *Advance*, miscellaneous repairs and painting to engine, deck, and steward departments; *Europa*, furnish and install 1 new valve in copper oil pipe; roll and punch tubes in forward boiler, etc.; U. S. S. Eagle *No. 4*, rebabbitt and refit forward thrust bearing; steamship *Haiti*, repair dynamo turbine engine, rebore blower engine cylinder, braze copper discharge pipe, etc.; U. S. S. *Bath*, make repairs to mainmast, renew one-half of wooden bearing, etc.; steamships *Jason*, miscellaneous repairs to boiler, etc.; *Newport*, renew exhaust line from port after winch; mine yawl *F-1*, calk and resheath hull with copper; U. S. S. *Harding*, manufacture 3 stems for bilge strainer, etc.; launch *No. 11;* miscellaneous repairs to engine, calk and copper paint hull, etc.; tug *Porto Bello*, renew broken combustion chamber staybolts on top of combustion chamber, etc.; steamships *Crisfield*, U. S. S. *Mahan*, steamships *Acme*, *Point Bonita*, tug *Tavernilla*, launches *Mary B*, *Doris*, *Margarita*, dredge *No. 86*, minor repairs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Two Weeks Ending February 12, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Laura C. Hall	Pacific Metals Corporation		January 30		12
Caribbean	Panama Railroad Cattle Industry		January 30		[3] 321
Guatemala	Pacific Steam Navigation Co		January 31		1,970
Quillota	Pacific Steam Navigation Co		January 31		186
Quilpue	Pacific Steam Navigation Co	January 30	February 1	57	109
Achilles	Panama Railroad Steamship Line	January 30	February 3	12,028	(4)
Darien [1]	Panama Railroad Steamship Line	January 30	February 3	7,480	(4)
Cartago	United Fruit Co	January 31	February 3	745	240
Panama	Panama Railroad Steamship Line		February 3		1,480
Manavi	Pacific Steam Navigation Co	February 1		535	
Essequibo	Pacific Steam Navigation Co	February 2	February 3	(2)	161
Carrillo	United Fruit Co	February 2	February 3	664	142
Atenas	United Fruit Co	February 2	February 2	[3] 480	5
Gen. O. H. Ernst	Panama Railroad Steamship Line	February 2	February 5	3,807	1,706
Santa Marta	United Fruit Co	February 3	February 3	13	[3] 200
Wm. H. Page	C. Curran & Bullitt	February 3	February 5	7,930	(4)
Caribbean	Panama Railroad Cattle Industry	February 3		240	
Acajutla	Pacific Steam Navigation Co	February 3		586	
Salvador	Pacific Steam Navigation Co	February 4		144	
Jamaica	Pacific Steam Navigation Co		February 4		360
Toloa	United Fruit Co	February 4	February 5	2	94
Oriana	Pacific Steam Navigation Co	February 4	February 5	149	(4)
Urubamba	Peruvian Line		February 5		926
San Juan	Pacific Mail Steamship Co		February 5		839
St. Louis	French Line	February 4		621	
Stuyvesant	Royal Dutch W. I. Mail	February 5	February 5	54	201
Patuca	United Fruit Co	February 5	February 5	50	(4)
Gen. W. C. Gorgas	Panama Railroad Steamship Line	February 6	February 8	29	438
Ebro	Pacific Steam Navigation Co	February 6	February 7	102	
Cauca	Pacific Steam Navigation Co	February 7		500	
Angelo Toso	Societa Nazionale di Navigazione	February 7	February 8	9½	
Allianca	Panama Railroad Steamship Line	February 7	February 10	2,203	175
Deepwater	Panama Railroad Steamship Line	February 8	February 9	11,827	
Heredia	United Fruit Co	February 8	February 10	1,027	63
De Soto	Standard Oil Co	February 8	February 10	7,500	
Pont Bonita	Pacific Mail Steamship Co	February 8	February 10	178	49
Boarn	Royal Dutch West India Mail	February 8	February 9	286	2
Nessian	Leyland Line	February 9	February 11	776	4,858
Cristobal	Panama Railroad Steamship Line	February 9	February 12	9,616	2
Gen. H. F. Hodges	Panama Railroad Steamship Line	February 9	February 12	383	
Point Judith	Pacific Mail Steamship Co	February 9	February 10	26	383
Ancon	Panama Railroad Steamship Line	February 10	February 12	10,099	
Salvador	Pacific Steam Navigation Co		February 11		692
Magellan	Pacific Steam Navigation Co	February 10	February 11	90	226
Calamares	United Fruit Co	February 11	February 12	365	22
Newport	Pacific Mail Steamship Co	February 11		247	
San Mateo	United Fruit Co	February 12	February 12	70	
Colon	Panama Railroad Steamship Line	February 12		3,240	

[1] Barge. [2] No cargo discharged. [3] Pounds. [4] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Three Weeks Ending February 12, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Jamaica	Pacific Steam Navigation Co.	January 24	January 24	61	.....
Guatemala	Pacific Steam Navigation Co.	January 24	January 24	7	.....
City of Para	Pacific Mail Steamship Co.	January 25	January 25	.....	18
Balboa	Colombian Maritime Co.	January 25	January 25	.....	13
San Juan	Pacific Mail Steamship Co.	January 25	January 25	8	.....
Cuba	Pacific Mail Steamship Co.	January 26	January 28	.....	153
Eastern Sword	United States Shipping Board	January 27	January 29	258	.....
Laura C. Hall	Pacific Metals Corporation	January 27	January 28	2	.....
Ulysses	Panama Railroad Steamship Line	January 25	January 27	11,998	.....
Jalapa	United States Shipping Board	January 28	.....	8,036	.....
Betsy Bell	United States Shipping Board	.....	January 29	.....	.....
Laura C. Hall	Pacific Metals Trans. Corp.	January 30	January 30	.....	58
Jalapa	United States Shipping Board	January 28	February 2	.....	991
Babinda	Pacific Freighters	February 1	February 4	934	.....
Acajutla	Pacific Steam Navigation Co.	February 2	February 3	12	.....
Salvador	Pacific Steam Navigation Co.	February 4	February 4	54	.....
Balboa	Colombian Maritime Co.	February 4	February 5	2	.....
Balboa	Colombian Maritime Co.	February 7	February 7	.....	1
Cauca	Pacific Steam Navigation Co.	February 7	February 7	11	.....
Angelo Toso	Societa Nazionale di Navigazione	February 8	February 9	23	.....
Newport	Pacific Mail Steamship Co.	February 10	February 10	13	42

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies, including the 25 per cent surcharge, effective February 1, 1921:

Commodities.	Unit.	Price.
Brass, bar	Lb.	$0.44
Brass, sheet	Lb.	.75
Bronze, Tobin	Lb.	375
Cement, at Panama:		
Including surcharge	Bag	2.11
Credit for empty bag returned	Bag	.25
Cement, at Colon:		
Including bag and surcharge	Bag	1.95
Credit for empty bag returned	Bag	.25
Charcoal	Cwt.	1.63
Copper, bar	Lb.	.44
Gasoline, motor grade, in drums	Gal	.56
Lead, sheet	Lb.	.17
Lead, pig	Lb.	.125
Lumber, yellow pine or fir, except ceiling	M ft. B. M.	93.75
Lumber, ceiling, siding, and flooring, 1" x 6"	M ft. B. M.	118.75
Lumber, flooring, 1" x 3" and 1" x 4"	M ft. B. M.	143.75

Lumber, native, prices per 1,000 feet board measure:

Kind.	Rough. Green.	Rough. Kilned.	Dressed. Green.	Dressed. Kilned.
Almendra	$106.25	$118.75	$115.00	$127.50
Alcavu	87.50	100.00	96.25	108.75
Alcareto	106.25	118.75	115.00	127.50
Amargo	106.25	118.75	115.00	127.50
Bateo	62.50	75.00	71.25	83.75
Cedro Amargo	106.25	118.75	115.00	127.50
Caoba Blanca	87.50	100.00	96.25	108.75
Guayacan	137.50	150.00	146.25	158.75
Maria	62.50	75.00	71.25	83.75
Pilon	75.00	87.50	83.75	96.25
Roble	62.50	75.00	71.25	83.75
Mangle Colorado	106.25	118.75	115.00	127.50
Nispero	137.50	150.00	146.25	158.75

Notes:

1. Second grade Alcavu $68.75
2. Second grade Caoba Blanca 68.75
3. Second grade Cedro Amargo 93.75
4. Almendra, special 75.00
5. Alcareto, special 75.00
6. Amargo, special 75.00
7. The charge for dressing and kiln-drying the same for second grade as first grade.
8. The charge for dressing 2 sides or 4 sides lumber the same.

Commodities.	Unit.	Price.
Metal, yellow	Lb.	$0.375
Nuts, iron, machine, hexagon	Lb.	.69
Nuts, iron, machine, square	Lb.	.225
Nails, common wire	Lb.	.13
Nails, galvanized	Lb.	.15
Oakum, navy, spun	Lb.	.20
Oakum, navy, unspun	Lb.	.175
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl of 42 gals	3.50
Oil fuel, at Balboa and Cristobal, in drums or barrels, no surcharge	Bbl of 42 gals	3.75
Oils, greases, and lubricants:		
Oil, air, compressor cylinder	Gal.	.575
Oil, ammonia cylinder	Gal.	.685
Oil, burning	Gal.	1.56
Oil, cylinder, dark, marine	Gal.	1.125
Oil, cylinder, dark, marine	Gal.	1.25
Oil, ice, machine, steam	Gal.	1.00
Oil, engine, dynamo	Gal.	.79
Oil, engine, in tins	Gal.	.69
Oil, engine, in barrels	Gal.	.65
Oil, gas, engine, heavy, in barrels	Gal.	1.05
Oil, gas, engine, in cases, heavy	Gal.	1.175
Oil, gas, engine, in drums, medium	Gal.	.66
Oil, kerosene, in drums	Gal.	.375
Oil, kerosene, in tins (cases)	Gal.	.45
Oil, linseed, boiled	Gal.	2.50
Oil, linseed, raw	Gal.	2.19
Oil, locomotive engine	Gal.	.59
Oil, lard	Gal.	2.125
Oil, marine engine	Gal.	1.06
Oil, marine engine	Gal.	.625
Oil marine engine	Gal.	1.06
Oil, marine engine	Gal.	.75
Oil, marine engine	Gal.	1.02
Oil, mineral seal	Gal.	.375
Oil, nonliquid	Lb.	.09
Oil, stationary engine	Gal.	.49
Oil, sperm	Gal.	2.875
Oil, gas engine motor, heavy	Gal.	.94
Oil, signal	Gal.	1.40
Oil, valve	Gal.	.975
Oil, car	Gal.	.34
Grease, black gear	Lb.	.115
Grease, yellow, cup, No. 3	Lb.	.14
Grease, yellow, cup, No. 5	Lb.	.17
Grease, rod, special	Lb.	.25
Grease, tunnel bearing	Lb.	.215
Tallow	Lb.	.225
Turpentine	Gal.	2.40
Turpentine, substitute	Gal.	.69
Vaseline	Lb.	.18
Paint, lead, white, dry	Lb.	.175
Paint, lead, white, in oil	Lb.	.175
Paint, white, zinc, dry	Lb.	.225
Paint, white, zinc, in oil	Lb.	.21
Paint, zinc, 35 per cent in oil	Lb.	.19
Rivets	Lb.	.10
Rope, Manila, ¼" diameter	C. ft.	.69
Rope, manila, ⅜" diameter	C. ft.	1.50
Rope, manila, ½" diameter	C. ft.	2.50
Rope, manila, ⅝" diameter	C. ft.	4.185
Rope, manila, ¾" diameter	C. ft.	5.075
Rope, manila, ⅞" diameter	C. ft.	7.00
Rope, manila, 1" diameter	C. ft.	8.75
Rope, manila, 1¼" diameter	C. ft.	12.90
Rope, manila, 1½" diameter	C. ft.	19.69
Rope, manila, 1¾" diameter	C. ft.	26.81
Rope, manila, 2" diameter	C. ft.	31.44
Rope, manila, 2½" diameter	C. ft.	51.50
Rope, manila, 3" diameter	C. ft.	76.25
Rope, manila, 3½" diameter	C. ft.	91.25
Rope, manila, 4" diameter	C. ft.	124.125
Soap, laundry	Lb.	.175
Soda, ash	Lb.	.05
Steel, bar	Lb.	.09
Steel, spring	Lb.	.21
Steel, cold, rolled, round	Lb.	.20
Steel, sheet	Lb.	.06
Steel structural (angles, beams, etc.)	Lb.	.06
Tin, block	Lb.	.69
Tin, banca	Lb.	.625
Tin, sheet	Lb.	.225
Washers, cut	Lb.	.15
Waste, colored	Lb.	.26
Waste, white	Lb.	.26
Zinc, boiler plate, ⅛" x 6" x 12"	Lb.	.21

United States Civil-Service Examinations.

Examinations for stenographer and typist, Panama Canal Service, will be held at Balboa Heights, C. Z., February 19, 1921. Details may be secured from the Civil Service Board, Balboa Heights.

Rats in the Jungle Are a Factor in the Plague Menace.

During the recent clearing of an aeroplane landing place to the east of Miraflores Locks, the scrub brush and jungle were found to contain a great many rats. Several hundred of them were killed daily by the men making the clearing.

The Health Department was notified of the situation, and immediately investigated its effect on a possible introduction of plague into the Canal Zone. The men caught 5 rats in a few minutes in a space not more than 30 feet square. The biggest of the rats was found to have 8 fleas on him.

The rats and the fleas together are potential plague carriers. Their presence in such quantities so close to the Canal has emphasized the importance of the rat-proof construction of piers and buildings, and all the other antirat work carried on on the Isthmus. If the plague were introduced and became endemic among the rats in the jungle the situation would be difficult and dangerous.

In carrying on the plague-protective work, the Health Department is anxious to have rats for examination—preferably alive, with the fleas still on them, but either alive or dead. People who trap or kill rats are requested to turn them over to the district sanitary inspector. If the sanitary inspector's office is notified, the rats will be called for.

Accessions to the Library.

The following are among the books that have been added to the Panama Canal Library recently:

Ayres, May, "Healthful schools."
Bates, Arlo, "Talks on teaching literature."
Burnett, Dana, "Poems."
Carpenter, Edward, "Civilization; its cause and cure."
Chancellor, W. E., "A theory of motives, ideals, and values in education."
Chittenden, C. E., "What two children did."
Clark, S. H., "How to teach reading in the public schools."
Cubberley, E. P., "Public education in the United States."
Dillon, M. C., "The farmer of Roaring Run."
Durham, V. G., pseud., "Submarine boys."
Emerson, M. I., "The evolution of the educational ideal."
Field, Eugene, "The poems of Eugene Field."
Goodyear, L. E., "Secretarial bookkeeping."
Graham, Stephen, "Russia and the world."
Griffis, William Elliot, "Bonnie Scotland, and what we owe her."
Haggard, H. R., "Colonel Quaritch, V. C."
Howells, W. D., "Rise of Silas Lapham;" "Years of my youth."
McMurry, C. A., "Conflicting principles in teaching and how to adjust them."
McMurry, F. M., "How to study and teaching how to study."
Macfarlane, J. J., "Conversion tables of foreign weights, measures, and moneys."
Marquis, A. N., "Who's who in America."
Masters, E. L., "Domesday book."
McKenna, Stephen, "Sheila intervenes."
Patten, Gilbert, "Brick King, backstop;" "Courtney of the center garden;" "Covering the look-in corner;" "Guarding the keystone sack;" "Lefty o' the blue stockings;" "Lefty o' the training camp."
Philip, George, "Distance and speed tables."
Porter, Mrs. E. H., "Pollyanna."
Sheppard, W. H. C., "The rambler club in Panama."
Terman, L. M., "The intelligence of school children."
Waddle, C. W., "An introduction to child psychology."

The following magazines were received in The Panama Canal Library during the past week, and may be loaned for a period of four days:

American Magazine.
American Review of Reviews.
Army and Navy Journal.
Century.
Current History.
Delineator.
Edinburgh Review.
Etude.
Graphic.
Harper's.
Illustrated London News.
Munsey's.
Nautical Gazette.
Poetry.
World's Work.

In juvenile library.

American Boy.
St. Nicholas.
Youth's Companion.

Ancon-Balboa Bus Service.

The Bureau of Clubs and Playgrounds has established a motor bus service, operating between Ancon and Balboa between 4 and 11 p. m. Busses leave the Administration Building at Balboa Heights at 4.05 p. m. for Ancon and Balboa, and beginning at 4.15 p. m. a bus will leave Balboa clubhouse and Ancon clubhouse on the hour and at 15, 30, and 45 minutes after each hour until 10.30 p. m., maintaining a 15-minute schedule. The fare is 10 cents each way.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z. (telephone 286):

Assistant editor (films), $1,600 a year (male and female); form 1312; announcement No. 80; age, 20 but not 45 years; vacancies exist in the Division of Publications, Department of Agriculture, Washington, D. C.; February 23, 1921.

Associate physicist, $2,000 to $2,800 a year; assistant physicist, $1,400 to $1,800 a year (male and female); form 1312; announcement No. 1160-amended; age, below 50 years; vacancies exist in the Bureau of Standards, Department of Commerce, Washington, D. C.[1]

Bacteriologist, $130 to $180 a month; associate bacteriologist, $90 to $130 a month; assistant bacteriologist, $70 to $90 a month; junior bacteriologist, $30 to $50 a month (male and female); form 1312; announcement No. 85; age, 18 but not 55 years; vacancies exist in the Public Health Service; July 1, 1921.[2]

Chief of divisions, $2,500 a year (male and female); announcement No. 77; form 2118; age, within reasonable age limits; vacancies exist in the Bureau of Foreign and Domestic Commerce; February 23, 1921.[2]

Chief, section of dental referees, $4,000 to $6,000 a year; form 1312; announcement No. 86 (male and female); age, within reasonable age limits; vacancies exist in the Bureau of War Risk Insurance; March 1, 1921.[2]

Chief statistician, $4,300 a year; schedule expert, Class A, $4,200 a year; schedule expert, Class B, $3,600 a year (male and female); form 2118; announcement No. 84; age, 25 but not 60 years; vacancies exist in the United States Railroad Labor Board, Chicago, Ill., March 1, 1921.[2]

Dental referee, $3,600 to $4,000 a year; assistant dental referee, $3,000 a year (male and female); form 1312; announcement No. 87; age, within reasonable age limits; vacancies in the Bureau of War Risk Insurance; May 3, 1921.[2]

Ethnologist, $1,800 a year (male and female); form 2118; announcement No. 71; age, 25 but not 50 years; vacancies exist in the Smithsonian Institution; February 21, 1921.[2]

Food and drug inspector, $1,600 a year (male and female); form 1312; announcement No. 82; age, 20 but not 45 years; vacancies exist in the Bureau of Chemistry, Department of Agriculture; February 23, 1921.

Geologist, $2,400 a year and higher; associate geologist, $2,100 to $2,340 a year; assistant geologist, $1,800 to $2,040 a year; geologic aid, $1,440 to $1,740 a year (male and female); form 1312; announcement No. 75; age, 20 but not 45 years; vacancies exist in the Geological Survey, Department of the Interior; February 23 and 24, 1921.

Investigator in poultry and egg handling, $1,620 to $2,400 a year (male and female); form 1312; announcement No. 76; age, below 45 years; vacancies exist in the Bureau of Chemistry, Department of Agriculture; February 23, 1921.

Laboratory assistant, $1,200 to $1,380 a year (male and female); form 1312; announcement No. 354-amended; age, below 35 years; vacancies exist in the Bureau of Standards, Department of Commerce.[1]

Laboratory assistant, junior grade, $1,000 a year; senior aid, $900 a year (male and female); form 1312; announcement No. 329-amended; age, below 35 years; vacancies exist in the Bureau of Standards, Department of Commerce.[1]

Lithographic stone polisher, stone planer, and stone grainer, $900 a year (male and female); form 1800; announcement No. 81; age, 20 but not 50 years; vacancies exist in the Engraving Division, Geological Survey, March 1, 1921.[2]

Master computer, $1,800 to $2,400 a year; computer, grade I, $1,400 to $1,800 a year; computer, grade II, $900 to $1,400 a year (male and female); form 1312; announcement No. 517-amended; age, below 50 years; vacancies exist in the Ordnance Department at Large of the War Department; May 3, 1921.[2]

Plant propagator, $1,800 a year (male and female); form 1312; announcement No. 69; age, 25 but not 55 years; vacancies exist in the Bureau of Plant Industry, Department of Agriculture; February 23, 1921.

Research and editorial assistant, $2,400 to $3,000 (male and female); form 2118; age, 25 but not 50 years; vacancies exist in the Federal Board of Vocational Education, Washington, D. C.; March 1, 1921.[2]

Specialist in cotton classing, $2,700 to $4,000 a year (male and female); form 2118; announcement No. 83; age, 25 but not 60 years; vacancies exist in the Bureau of Markets, Department of Agriculture, March 1, 1921.[2]

Stenographer, typist, and stenographer-typist, Departmental Service; No. 807-amended-supplemental; weekly holding of examinations discontinued after January 25, 1921.

Timber cruiser, $3.50 per diem (male and female); form 1312; announcement No. 70; age, 20 but not 46 years; vacancies exist in the field service of the General Land Office; February 23, 1921.

Agriculturist, irrigated field crops (male and female); $1,800 to $2,400 a year; form 2118; announcement No. 89; age, below 45 years; vacancies exist in the Bureau of Plant Industry, Department of Agriculture, Umatilla Reclamation Project, Hermiston, Oreg.; March 1, 1921.[2]

Assistant in nematology, $1,000 to $1,800 a year (male and female); form 2118; announcement No. 94; age, 21 but not 55 years; vacancies exist in the Bureau of Plant Industry, Department of Agriculture, Washington, D. C.; March 1, 1921.[2]

Dental hygienist, $720 a year (male and female); form 1312; announcement No. 96; age, within reasonable age limits; vacancies exist in the Public Health Service; March 1, 1921.[2]

Field superintendent in insect control, $1,800 to $2,400 a year (male and female); form 2118; announcement No. 91; age, below 50 years; vacancies exist in the Bureau of Entomology, Department of Agriculture; March 1, 1921.[2]

Fish pathologist, $2,500 a year (male and female); form 2118; announcement No. 92; age, 24, but not 45 years; vacancies exist in the Bureau of Fisheries, Department of Commerce; March 1, 1921.[2]

Historian, $4,000 a year (male and female); form 2118; announcement No. 90; age, 25 but not 60 years; vacancies exist in the Air Service, War Department, Washington, D. C.; March 1, 1921.[2]

Naturalist (Bureau of Fisheries); $2,200 a year (male and female); form 2118; announcement No. 95; age, 25 but not 45 years; vacancies exist in the Bureau of Fisheries; March 1, 1921.[2]

Nematologist and technologist, $2,700 to $3,000 a year (male and female); form 2118; announcement No. 88; age, 25 but not 40 years; vacancies exist in the Bureau of Plant Industry, Department of Agriculture, Washington, D. C.; March 1, 1921.[2]

Research and editorial assistant, $2,400 to $3,000 a year (male and female); form 2118; announcement No. 93; age, 25 but not 50 years; vacancies exist in the Federal Board for Vocational Education, Washington, D. C.; March 1, 1921.[2]

Signalman, $1,200 a year (male and female); form 1312; announcement No. 104; age, 25 but not 55 years; vacancies exist in the United States Coast and Geodetic Survey; March 1, 1921.[2]

Valuation aid (oil and gas), $1,200 to $2,500 a year; assistant valuation engineer (oil and gas), $2,500 to $3,600 a year; valuation engineer (oil and gas), $3,600 to $4,800 a year (male and female); form 1312; announcement No. 234-amended; age, 21 but not 55 years; vacancies exist in the technical staff of the Income-Tax Unit, Bureau of Internal Revenue, Treasury Department; May 3, 1921.[2]

Biologist, $2,500 to $3,000 a year (male and female); form 1312; age, below 55 years; vacancies exist in the Hygienic Laboratory, Public Health Service, Washington, D. C.; March 15, 1921.[2]

Coal mining engineer, $4,000 to $4,800 a year; associate coal mining engineer, $3,000 to $4,000 a year; assistant coal mining engineer, $2,000 to $3,000 a year; junior coal mining engineer, $1,500 to $2,000 a year (male and feamle); form 2118; age, below 45 years; vacancies exist in the Bureau of Mines, Department of the Interior; March 15, 1921.[2]

Engineer in forest products, $2,400 to $3,600 a year; associate engineer in forest products, $2,160 to $2,340 a year; assistant engineer in forest products, $1,500 to $2,100 a year; chemist in forest products, $2,400 to $3,600 a year; associate chemist in forest products, $2,160 to $2,340 a year; assistant chemist in forest products, $1,500 to $2,100 a year; wood technologist, $2,400 to $3,600 a year; associate wood technologist, $2,160 to $2,340 a year; assistant wood technologist, $1,500 to $2,100 a year (male and female); form 1312 or 2118; age, within reasonable age limits; vacancies exist in the Forest Products Laboratory of the Forest Service, Department of Agriculture, Madison, Wis.; May 3, 1921.[2]

Gyro compass aid, $12.08 per diem (male and female); form 1312; age, 21 but not 45 years; vacancies exist in the Industrial Department, Navy Yard, Norfolk, Va.; March 15, 1921.[2]

Junior explosives engineer, $1,560 to $1,820 a year (male and female); form 2118; age, 21 but not 45 years; vacancies exist in the Bureau of Mines, Department of the Interior, Pittsburgh, Pa.; March 15, 1921.[2]

Microanalyst, $1,200 to $1,800 a year (male and female); form 2118; age, within reasonable age limits; vacancies exist in the Burear of Chemistry, Department of Agriculture; March 15, 1921.[2]

Psychologist, $1,600 to $2,200 a year (male and female); form 1312; age, below 55 years; vacancies exist in the Public Health Service; March 15, 1921.[2]

Assistant engineer, $4,000 a year (male and female); form 1312; announcement No. 100; age, 30 but not 55 years; vacancies exist in the Engineer Department at Large, Chattanooga, Tenn.; March 15, 1921.[2]

Psychologist, $1,600 to $2,200 a year (male and female); form 1312; announcement No. 97; age, below 55 years; vacancies exist in the Public Health Service; March 15, 1921.[2]

Stenographer, typist, and stenographer-typist, $900 to $1,000 a year for typist; $1,000 to $1,200 a year for stenographer and stenographer-typist (male and female); form 304; announcement No. 807-amended; age, 18 but not 55 years; vacancies exist in the Departmental Service, Washington, D. C.

[1] Nonassembled. Applications will be received at any time until further notice.

[2] Nonassembled. Date given for nonassembled examination is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Deceased and Insane Employees.

The estates of the following deceased or insane employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

DECEASED.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Joseph Allen	20904	Barbados	Panama	Supply Department	Jan. 20, 1921.
Nicholas Escobar	45607	Panama	Colon	Panama Railroad	Jan. 21, 1921.
James Franklin	24892	Barbados	Colon	Marine Division	Jan. 28, 1921.
Edward Pavan	23891	Colombia	Camp Bierd	Panama Railroad	Jan. 31, 1921.
Conrad T. Janke *alias* Charles T. Jackson.	3029	United States	Balboa	Panama Railroad	Aug. 11, 1920.
John William Henry, *alias* John William Thomas, *alias* W. John Thomas, *alias* Wilfred Thomas	20877	Jamaica	Panama	The Panama Canal	Jan. 28, 1921.

INSANE.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of commitment.
Eugene L. Grazette	43783	Barbados	Panama	Building Division	Jan. 13, 1921.
John Carmichael	37526	Barbados	Panama	Health Department	Jan. 13, 1921.

Official Circulars.

Acting Governor.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 9, 1921.

To all concerned—Effective February 10, 1921, and during my absence from the Isthmus on leave, Col. Jay J. Morrow, U. S. A., Engineer of Maintenance, will be Acting Governor.

CHESTER HARDING,
Governor.

Travel Time.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 5, 1921.

CIRCULAR No. 603-18.

Paragraph 2 of Circular No. 603-17, is amended by the addition thereto of the following:

"In all cases where lodging and meals are obtained or obtainable at or adjacent to the place where the work is performed, payment will be made only for the actual time worked and the time necessary to travel to and from the work."

CHESTER HARDING,
Governor.

Duties of President, Panama Railroad Company.

PANAMA RAILROAD COMPANY,
OFFICE OF THE PRESIDENT,
BALBOA HEIGHTS, C. Z., February 9, 1921.

To all concerned—Effective February 10, 1921, and during my absence from the Isthmus on leave, Col. Jay J. Morrow, U. S. A., Second Vice President, will perform such duties of the President as relate to the operations of the company on the Isthmus.

CHESTER HARDING,
President, Panama Railroad Company.

Acting Superintendent, and Acting Master of Transportation, Panama Railroad.

PANAMA RAILROAD COMPANY,
OFFICE OF THE PRESIDENT,
BALBOA HEIGHTS, C. Z., February 9, 1921.

To all concerned—Effective February 9, 1921, and during the absence on leave of Mr. S. W. Heald, Mr. W. F. Foster will act as Superintendent of the Panama Railroad Company, and Mr. W. J. Bissell will act as Master of Transportation.

CHESTER HARDING,
President.

Absences from Family Quarters.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 10, 1921.

To all concerned—Paragraph 19 of Circular No. 627-24, dated June 3, 1919, reads as follows:

"Periods of less than 10 days will not be charged against absence from quarters. Employees will be required to notify the district quartermasters at expiration of leave period and on date they re-occupy quarters of the total time absent during that period."

In addition to the foregoing, and in order that district quartermasters may have accurate information for enforcing the rules governing quarters, each employee regularly assigned to Panama Canal quarters shall notify the district quartermaster when his family or the dependent relative, on account of whom he is holding quarters, vacates quarters for a period of 10 days or more, and does not request transportation by Panama Railroad steamers.

The re-occupation of quarters must be reported in all cases.

JAY J. MORROW,
Acting Governor.

Acting Storekeeper, Cristobal.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 29, 1921.

To all concerned—Effective February 1, 1921, Mr. Walter R. Smith will act as Storekeeper, Supply Department, Cristobal, during the absence on leave of Mr. L. J. Stapleton.

R. K. MORRIS, *Chief Quartermaster.*

Requirements for Printing.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 27, 1921.

TO ALL DEPARTMENTS AND DIVISIONS:

On account of the large amount of rush work which has been requested by departments and divisions on The Panama Canal Press, it has been necessary to operate the plant on a 10½-hour per day basis. It is believed that if the departments and divisions will anticipate their requirements we will be able, in a short time, to get back on an 8-hour basis. It is desired, therefore, that no overtime work be requested except when absolutely necessary, and that requirements for printing be anticipated as much as possible to avoid overtime work.

R. K. MORRIS, *Chief Quartermaster.*

Protection of Leave Status.

THE PANAMA CANAL
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., January 31, 1921.

To all concerned—A number of employees, whose service year dates from April 1, will have earned a total of 120 or more days leave upon the expiration of 10 months of the service year January 31, 1921.

Under the regulations it will be necessary to reduce the number of days leave earned to less than 120 by entering on leave of absence, or by forfeiting leave by written notice, not later than May 31, 1921, unless deferred for official reasons. Otherwise, the employee ceases to earn additional cumulative leave after April 1, 1921, unless he is granted all or part of the cumulative leave already earned.

In order to protect his leave status, each employee coming under the status as indicated herein, or any other employee affected in a like manner upon the expiration of his service year, will be governed accordingly. Information regarding the amount of leave due can be procured by calling up the Leave Clerk, Personnel Bureau, telephone Balboa 168.

By direction of the Governor.

C. A. MCILVAINE, *Executive Secretary.*

COMMISSARY NOTE.

Ice Bills.

All commissary customers are requested to pay their ice bills for March not later than the 23d of this month. It is necessary to ask that this be done in order to save considerable overtime in this office and to insure necessary records being prepared in time for the first delivery on March 1. February being a short month there are 2 days less than usual in which to do this work.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates, domestic, $1.00 per year; foreign, $1.50; address The Panama Canal Record, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Volume XIV. Balboa Heights, C. Z., February 23, 1921. No. 28.

Rebuilding Steamship "Marne" at Balboa Shops.

The steamship *Marne*, rebuilt at Balboa shops after two sinkings to extinguish fire in the cargo, sailed for New Orleans on February 16. The following summary of the work done on her has been furnished by the chief planner of the Mechanical Division:

This ship reached Balboa shops early in July, 1920, and has been turned over to the Shipping Board, after having been under repairs for a period of about 7 months.

As a result of two explosions, fire in the cargo, and the holes through the hull and superstructure which resulted from the sinking operations made necessary to extinguish the fire, and which were caused by gunfire from a submarine, the ship was as near a wreck as can be easily imagined. The shell was full of innumerable holes, those near the water line plugged up, the superstructure was a mass of twisted metal with little semblance of its original shape, the smokestack was missing, the rigging was slack and broken, the booms were laid out without semblance of stowage, and the decks were covered with miscellaneous twisted metal and gear left over from the wrecking operation.

As a preliminary to repairs, the ship was completely stripped, until only the bare hull remained. Later, the deck and shell plates were removed over large sections, so far as could be done without danger of springing the ship. The main turbine and all auxiliary machinery were removed from the ship, except one or two pumps left aboard which were in working order and connected up with compressed air at all times to pump out the ship should she begin to take water.

Fortunately, no holes were shot through the boilers, so that it was unnecessary to remove them from the ship. Approximately 35 per cent of the shell plates were removed during the course of repairs, and about 10 per cent of those removed were renewed. The remainder were rolled out and replaced. The shelter deck, while badly warped, required the renewal of only about four or five plates, the balance being successfully rolled. In some instances where shell plates were perforated by shell holes, and the plate itself, except for this damage, in good condition, the acetylene process of welding was used, blanks being welded through the holes after they had been trimmed up to an approximate circle. The acetylene welding process is not new, it having been in use for a number of years, but a job of the magnitude of the *Marne* demonstrates its high value in a repair plant, as innumerable repairs can be made which, before the use of this system, would require considerable new material and a great deal more labor.

No especial difficulties were encountered in the work that could not be easily handled by the facilities of the Balboa shops. Some difficulty was encountered, however, in securing the prompt delivery of material.

When the ship was turned over to the Shipping Board for return to the United States, she had the appearance of being, and was undoubtedly, as strong and seaworthy as when first launched.

Return Cargoes of Coconut Oil in Tank Spaces.

The American tank steamship *Acme*, belonging to the Standard Oil Company, passed through the Canal on February 10, bound from Cebu, P. I., to New York with a whole cargo of coconut oil, consisting of 8,020 tons. The *Acme* had passed through the Canal, outward bound, on November 2, carrying 8,807 tons of petroleum from Port Arthur to Woosung. After cleaning her tanks she was able to load a cargo of coconut oil.

In the same manner the Pacific Mail Steamship Company intends to handle coconut oil in part of the fuel oil bunker space of the new ships of the "State" class in trans-Pacific service. They will bunker with enough oil for the round voyage before leaving San Fransisco, and for the return voyage will clean the tanks from which the fuel oil has been used and fill them with coconut oil.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, February 19, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Cauca	7	18.00	13	6.15	13	13.50	13	15.05	British	Pacific Steam Navigation Co.	246.0	35.0	13.6	Cristobal	Guayaquil	General	198	1,592	1,023
Geddington Court	12	13.10	13	6.25	13	14.33	13	15.50	British	Haldin & Co.	374.0	51.0	23.8	New York	Yokohama	General	6,254	5,055	3,602
Orani	12	17.33	13	6.37	13	14.52	13	16.08	American	Williams, Dimond & Co. (S. B.).	402.0	53.1	18.6	Havre	Los Angeles	General	1,650	6,577	4,954
Willpolo	13	1.00	13	8.00	13	15.43	13	16.53	American	Williams Steamship Co.	386.0	52.0	25.6	New York	Los Angeles	General	7,223	5,680	4,112
San Francisco [1]	13	7.50	13	8.30	13	16.22	.....	.....	American	United States Navy	327.0	49.0	23.0	Curacao	Balboa	.....	.....	.....	.....
Mallard [2]	13	8.10	13	8.30	13	16.26	.....	.....	American	United States Navy	187.0	38.0	19.0	Curacao	Balboa	.....	.....	.....	.....
Murray [3]	12	7.45	13	8.48	13	16.27	.....	.....	American	United States Navy	315.0	30.0	12.0	Curacao	Balboa	.....	.....	.....	.....
Mahan	12	7.55	13	8.48	13	16.28	.....	.....	American	United States Navy	315.0	30.0	12.0	Curacao	Balboa	.....	.....	.....	.....
Aroostook [4]	6	5.18	13	10.15	13	17.49	.....	.....	American	United States Navy	489.0	52.0	19.6	Santiago	Balboa	.....	.....	.....	.....
Genoa Maru	13	1.25	13	10.57	13	19.11	13	20.35	Japanese	Nippon Yusen Kabushiki Kaisha	425.0	53.8	28.0	New York	Shanghai	General	8,655	6,897	5,063
Santa Tecla	12	23.48	13	11.55	13	19.43	13	21.42	American	W. R. Grace & Co.	299.0	40.0	21.1	New York	Callao	General	2,550	2,835	1,827
Palm Branch	13	6.30	13	13.15	13	21.27	14	12.33	British	F. & W. Ritson	360.0	45.0	22.8	London	Corral	General	3,740	4,161	3,133
Lark [2]	13	14.37	14	6.31	14	13.10	.....	.....	American	United States Navy	187.0	38.0	16.0	Curacao	Balboa	.....	.....	.....	.....
Atlantica	13	16.05	14	6.40	14	14.57	14	16.15	French	French Government	378.1	52.3	22.9	Charleston	Caldera	Coal	5,206	5,145	3,741
Gannett [2]	1-27	16.55	14	9.50	14	15.56	.....	.....	American	United States Navy	187.0	35.0	.....	Cristobal	Balboa	.....	.....	.....	.....
Pearl Shell	14	9.20	14	13.02	14	21.27	14	22.37	American	Pearl Shell Co.	411.6	53.4	25.2	Port Arthur	Shanghai	Kerosene	7,471	6,056	4,561
Acajutla	12	6.15	15	6.00	15	13.03	15	18.10	British	Pacific Steam Navigation Co.	215.7	33.5	16.9	Cartagena	Tumaco	General	835	1,273	706
Nanna Stub	14	13.20	15	6.28	15	14.12	15	15.35	Norwegian	Charles Stub	332.0	42.0	24.0	New York	Sydney	Case oil	4,850	4,328	3,273
Nils	15	6.15	15	7.25	15	15.23	15	16.50	Norwegian	Mayer & Leif Steamship Co.	265.0	42.1	17.0	New Orleans	Talara	Iron pipes	1,800	2,117	1,404
Eagle No. 4 [5]	.....	.....	15	10.55	16	9.46	.....	.....	American	United States Navy	.....	.....	.....	Cristobal	Balboa	.....	.....	.....	.....
Santa Elisa	15	16.49	16	6.05	16	12.55	16	14.05	American	W. R. Grace & Co.	360.5	51.7	23.9	New York	Valparaiso	General	2,591	5,957	4,325
Laura C. Hall [6]	14	17.55	16	6.18	16	14.21	17	18.05	British	Pacific Metals Corporation	81.0	25.6	9.6	Cristobal	Buenaventura	General	15½	130	69
Australind	15	21.47	16	6.26	16	14.31	16	15.35	British	Trinder Anderson	395.0	50.0	25.5	Newport News	Wellington	Coal	4,938	5,654	4,167
Europa	13	13.28	16	7.38	16	15.21	16	16.39	Italian	La Veloce Line	454.7	53.4	24.6	Genoa	Valparaiso	General	660	8,052	4,915
Yayoi Maru	16	6.50	16	8.45	16	16.24	17	0.45	Japanese	Kokusai Kisen Kabushiki Kaisha	400.0	53.0	25.6	Newport News	San Antonio	Coal	6,824	5,869	4,286
Advance	13	20.26	16	11.15	16	17.50	17	0.10	American	Panama Railroad Steamship Line	295.0	38.0	15.3	New York	Guayaquil	General	475	2,947	2,113
S. V. Harkness	16	11.02	16	11.30	16	19.40	18	0.07	American	Standard Oil Co.	419.0	57.2	26.0	Tampico	Pisagua	Crude oil	8,518	7,443	5,545
Gorala	16	8.35	16	12.07	16	20.25	16	21.55	British	British India Steam Nav. Co.	400.0	52.3	26.4	New Orleans	Freemantle	General	6,156	5,762	4,097
Australmount	16	14.58	17	6.39	17	14.52	17	16.15	British	Australian Government	376.0	52.0	23.0	Pala Alto	Sydney	Sugar	5,560	4,777	3,520
City of Alameda	17	6.50	17	7.54	17	15.35	.....	.....	American	Columbus Shipping Co. (S. B.)	435.0	56.0	26.0	Baton Rouge	Balboa	Crude oil	8,900	7,614	5,326
Cara [7]	17	.....	17	6.37	17	14.53	17	16.00	American	Maj. G. L. Fitzwilliams	45.0	9.0	3.4	Colon	Panama	Ballast	.....	9	9
Rosana [8]	16	19.08	18	9.48	18	17.39	19	13.25	Costa Rican	Alberto Fait	112.0	25.0	6.6	Cristobal	Puntarenas	Ballast	.....	256	152
Hokkai Maru	18	12.05	18	11.25	18	19.05	18	20.13	Japanese	Taisho Kaiun Kaisha	369.0	49.0	24.0	New York	Dairen	Oil	5,542	4,823	3,462
Owl [9]	18	10.15	18	11.25	18	19.25	.....	.....	American	United States Navy	187.0	36.0	13.0	Hampton Rds.	Balboa	.....	.....	.....	.....

[1] Mine layer. [2] Mine sweeper. [3] Destroyer. [4] Aircraft tender. [5] Subtender. [6] Motor schooner. [7] Launch. [8] Motor ship. [9] Tug and barges *Nos. 275* and *281*.

Newport	11	17.30	19	6.16	19	13.43	19	23.25	American	Pacific Mail Steamship Co.	326.0	38.2	16.6	Cristobal	San Francisco	General		3,173	2,163
Partridge [10]	18	18.32	19	7.22	19	15.45			American	United States Navy	185.0	35.0		Cristobal	Balboa				
Sonoma [11]	19	19.23	19	8.55	19	18.46			American	United States Navy				Cristobal	Balboa				
Mulpua	19	8.39	19	9.05	19	18.02	19	23.25	American	Barber Line (S. B.)	402.6	53.0	27.0	New York	Honolulu	General		6,542	4,859
Easterling	19	2.51	19	12.35	19	20.20	19	21.50	American	Barber Line (S. B.)	384.3	51.2	27.8	Philadelphia	Hongkong	Oil		5,967	4,449

[10] Tug, towing barges *Nos. 285* and *316*.

[11] Tug, towing subchaser *No. 288*.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Strinda	12	20.00	13	6.37	13	18.55	13	21.30	Norwegian	J. Ludwig Mowinckel	439.5	57.0	25.6	Antofagasta	Cristobal [13]	Nitrate of soda	10,500	7,411	5,066
Crisfield	12	16.00	13	6.59	13	17.43	14	12.57	American	American Metal Transp. Co (S.B.)	402.6	54.8	26 6	Antofagasta	St. Thomas [13]	Nitrate	8,830	6,932	5,100
Jupiter	13	11.25	13	12.08	13	19.50	13	21.00	Spanish	Cia. Anon Maritime Union	389.2	52.1	23.0	Iquique	Dunkirk	Nitrate	7,021	5,223	3,994
Imperoyal	13	15.10	14	6.35	14	14.44	14	17.55	British	Imperial Oil Co	249.5	43.1	21.0	Talara	Halifax	Peruvian gasoline	2,659	2,291	1,595
Laura C. Hall [6]	13	16.47	14	9.11	14	17.55	16	6.18	British	Pacific Metals Corp	81.0	25.6	9.6	Buenaventura	Cristobal	Platinum	([14])	130	69
Mahan [3]	13	16.28	14	9.32	14	17.24	19	1.40	American	United States Navy	315.0	30.0	12.0	Balboa	Cristobal				
Murray [3]	13	16.27	14	9.44	14	17.29	19	3.20	American	United States Navy	315.0	30.0	12.0	Balboa	Cristobal				
Ohioan	14	9.40	14	10.33	14	19.07	14	19.07	American	United American Line	407.7	53.7	24.3	Seattle	New York	General	5,641	7,106	5,066
West Norranus	14	12.25	14	14.46	14	22.12	15	2.45	American	Thorndyke-Trenholm Co. (S. B.)	410.5	54.3	25.0	Tacoma	Cristobal [13]	Wheat	6,658		
Wilhelm [7]			14		14				American	United States Army				Balboa					
Hampstead Heath	15	7.05	15	9.11	15	17.20	17	11.52	British	Steam Nav. Co. of Canada	450.0	52.5	26.0	Caleta Buena	Hampton Rds.	Nitrate	7,900	6,729	4,828
Helikon	15	9.00	15	10.35	15	17.50	15	22.00	Norwegian	Brunsgaard Kistcrud & Co.	270.6	40.1	15.0	Buenaventura	New York	Cacao, coffee, etc.	832.58	2,304	1,493
Osaqumsick	14	10.45	15	10.53	15	19.55	15	19.55	American	Pacific Steamship Co. (S. B.)	401.9	53.1	27.0	Portland	Cristobal [13]	Wheat	7,402		
Barima	15	12.10	15	13.31	15	20.02			British	Pacific Steam Navigation Co.	220.5	37.1	11.7	Champerico	Cristobal	General	196	1,651	918
Rosana	16	1.20	16	9.00	16	19.08	18	9.48	Costa Rican	Alberto Fait	112.0	25.0	8.0	Puntarenas	Cristobal	Logs and sugar	181	256	152
Canadian Trooper	16	4.15	16	9.35	16	18.51	16	20.33	British	Canadian Govt. Merch. Marine.	320.0	44.2	20.1	Taltal	Dover, Eng	Nitrate	3,500	3,213	2,019
Thomas H. Wheeler	16	6.05	16	10.51	16	19.40	16	23.59	American	Standard Oil Co	425.8	57.0	27.6	San Francisco	New York	Gas oil	10,000	7,760	5,334
Sorata	16	6.45	16	8.00	16	17.18	16	20.15	British	Pacific Steam Navigation Co.	390.0	47.3	25.0	Valparaiso	Greenock	Borax, sugar	4,758	4,782	3,336
Chancellor	16	8.00	16	12.27	16	23.10	17	2.07	British	T. & J. Harrison	384.0	52.0	21.2	San Francisco	United King	General	5,637	5,370	3,789
Pomona	16	22.00	16	15.16	16	0.25	17	6.30	American	Williams, Dimond & Co. (S. B.).	440.0	56.0	30.0	Seattle	Liverpool	General	9,281	8,300	6,026
San Francisco	13	16.22	16	8.56	16	17.08			American	United States Navy	377.0	48.0	23.0	Balboa	Cristobal				
Lark	14	13.10	16	8.59	16	18.40	20	19.53	American	United States Navy	187.0	38.0	16.0	Balboa	Cristobal				
Sapelo [12]	12	14.08	16	11.03	16	20.25	16	20.25	American	United States Navy	461.6	60.0		Balboa	Port Arthur				
Sumatra Maru	16	9.15	16	12.21	16	21.14	16	21.14	Japanese	Osaka Shosen Kaisha	385.0	51.0	17.0	Calcutta	New Orleans	General	1,878	5,909	4,416
Santa Teresa	16	12.55	16	1.30	16	22.08	16	23.15	American	W. R. Grace & Co	360.2	51.6	24.0	Valparaiso	New York	Nitrate	3,800	5,726	4,086
Eagle No. 4	16	22.04	16	14.24	16	15.37	21	10.00	American	United States Navy	200.0	25.0	11.11	Balboa	Cristobal				
Junin	16	13.50	16	14.38	16	0.05	17	3.31	British	Pacific Steam Navigation Co.	391.9	50.2	25.0	Valparaiso	London	General	5,314	5,930	4,395
Mobile City	16	14.00	17	7.38	17	15.48	17	22.19	American	United States Steel Products Co.	395.5	56 0	27.0	San Francisco	London	Wheat, etc	7,575	7,285	5,256
Clyde Maru	16	19.05	17	8.32	17	16.31	17	19.15	Japanese	Kokusai Kisen Kabushiki Kaisha	490.0	53.0	26.2	Taltal	Ham'tonRds. [13]	Nitrate	7,774	5,868	4,324
Montrolite	17	8.00	17	10.34	17	18.25	17	20.40	American	Standard Oil Co	419.6	57.2	19.6	Vancouver	Tampico	Ballast		7,378	5,476
Borgland	17	20.00	18	7.04	18	15.57	18	15.57	Norwegian	Peter Olsen	362.0	51.5	24.0	San Francisco	Christiania	Barley, etc	6,000	5,274	3,886
West Isleta	17	22.28	18	8.20	18	16.26	18	16.26	American	North Atl. & Western S.S. Co. S.B.	409.8	54.2	23.0	Seattle	Philadelphia	Railroad ties, etc	4,831	6,759	4,785
Ardmore	17	23.00	18	9.04	18	18.10	19	7.13	American	Standard Oil Co	449.5	59.6	18.0	Antofagasta	Tampico	Ballast		6,321	
West Kebar	18	2.45	18	9.12	18	18.50	19	12.40	American	Sudden & Christensen (S. B.)	410.5	54.3	23.11	Portland	W. Hartlepool	Lumber	([15])		
Wabana	18	8.30	18	9.30	18	20.00	20	12.38	British	Lowden & Connell & Co	375.0	52.0	25.0	Mejillones	Cristobal [13]	Nitrate	6,921	5,257	3,374
Sonoma	1-16	0.15	18	11.03	18	19.23	19	8.55	American	United States Government	183.0	19.6		San Diego	Cristobal				
Ontario	1-15	23.00	18	11.06	18	19.25	20	6.50	American	United States Government	185.0	19.6		San Diego	Cristobal				
Gannett	14	15.56	18	11.25	18	18.33			American	United States Navy	187.0	42.0	13.0	Balboa	Cristobal				

[12] U. S. oil tanker.

[13] For orders.

[14] Two boxes.

[15] 4,100,000 ft. B. M.

MOVEMENTS OF OCEAN VESSELS—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC—Continued.

Ship	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Partridge	1-20	13.30	18	11.30	18	18.32	19	7.22	American	United States Navy	187.5	35.5	14.0	San Diego	Cristobal				
Finchley	18	10.30	18	12.10	18	21.00	19	1.25	British	British Steamship Co.	330.0	43.1	22.6	Iquique	New Orleans	Nitrate of soda	4,533	3,455	2,422
Neches	10	20.00	19	7.50	19	17.00	20	11.30	American	United States Navy	476.0	58.0	23.0	Callao	Port Arthur			5,620	4,124
Huasco	19	2.30	19	8.03	19	17.35			Chilean	South American Steamship Co.	378.8	44.0	19.0	Valparaiso	Cristobal	General	606	4,552	3,182
Maquan	19	2.15	19	8.55	19	19.25	20	7.40	American	Frank Waterhouse & Co. (S. B.)	402.4	53.1	26.7	Astoria	Liverpool	Wheat	7,351		
Richmond	19	4.00	19	9.53	19	19.02	20	3.05	American	Standard Oil Co.	419.4	54.2	20.0	San Francisco	Tampico	Ballast		6,690	4,149
Orient	19	6.30	19	11.34	19	20.20	20	6.32	American	Oriental Navigation Co.	376.4	52.3	23.6	Iquique	Norfolk	Nitrate	6,300	5,455	3,879
Lompoc	19	10.30	19	12.08	19	20.40	19	21.52	British	C. T. Bowring & Co.	435.4	55.8	19.0	Taltal	Tampico	Ballast		7,488	5,342
Peru	19	10.30	19	13.38	19	22.30			British	Pacific Steam Navigation Co.	350.0	43.1	16.1	Valparaiso	Cristobal	General	533½	3,968	2,441
Orion	14		19	14.30	19	23.45			American	United States Navy	514.0	65.0	22.7		Norfolk				
Garfield	19	5.00	19	15.01	19	0.30	20	12.30	American	W. R. Grace & Co.	299.4	45.0	17.0	Callao	New York	([16])	192	3,228	2,010
Standard Oil barge No. 95	19	4.20	19	14.58	19	1.30	20	3.05	American	Standard Oil Co.	360.5	50.0	11.6	San Francisco	Tampico	Ballast		4,238	3,689

[16] Ore, cotton, cocoa, and coffee.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Feb. 13	P. de Satrustegui	Spanish Line	Barcelona via wayports.
Feb. 13	Sciota[17]	United States Navy	High seas.
Feb. 14	Eagle No. 31	United States Navy	High seas.
Feb. 14	O-15[18]	United States Navy	High seas.
Feb. 15	Parismina	United Fruit Co.	New Orleans via wayports.
Feb. 15	Ulysses[19]	Panama Railroad Steamship Line	Norfolk.
Feb. 16	Glen White	C. Curran & Bullitt	Norfolk.
Feb. 16	Turrialba	United Fruit Co.	New Orleans via wayports.
Feb. 16	Sixaola	United Fruit Co.	New York via Kingston.
Feb. 16	Allianca	Panama Railroad Steamship Line	Colombian ports.
Feb. 17	Geo. W. Barnes	Pan.-Amer. Pet. & Transp. Co.	Tampico.
Feb. 17	Tivives	United Fruit Co.	Colombian ports.
Feb. 18	Pastores	United Fruit Co.	New York via wayports.
Feb. 18	Jan Van Nassau	Royal Netherlands W. I. Mail	Port Limon.
Feb. 19	Camito	Elders & Fyffes Line	Port Limon.
Feb. 19	Achilles[20]	Panama Railroad Steamship Line	Norfolk.
Feb. 19	Columbia	N. O. & S. A. S. S. Line	New Orleans via wayports

*DEPARTURES.

Date.	Vessel.	Line.	For—
Feb. 13	Ancon	Panama Railroad Steamship Line	Norfolk.
Feb. 13	Lake Franconia	United States Shipping Board	Port Limon.
Feb. 14	P. de Satrustegui	Spanish Line	Ponce and wayports.
Feb. 16	Turrialba	United Fruit Co.	New Orleans.
Feb. 17	Glen White	C. Curran & Bullitt	Hampton Roads.
Feb. 17	Tivives	United Fruit Co.	New York via Kingston.
Feb. 17	Sixaloa	United Fruit Co.	New York via wayports.
Feb. 17	Parismina	United Fruit Co.	New Orleans via Bocas del Toro and Habana.
Feb. 17	Haiti	French Line	Puerto Colombia.
Feb. 18	Colon	Panama Railroad Steamship Line	New York via Haiti.
Feb. 18	Ulysses[19]	Panama Railroad Steamship Line	Norfolk.
Feb. 18	Geo. W. Barnes	Pan.-Amer. Pet. & Transp. Co.	Tampico.
Feb. 18	Shawmut	United States Navy	Guantanamo.
Feb. 19	Camito	Elders & Fyffes Line	Kingston, Jamaica.
Feb. 19	Pastores	United Fruit Co.	New York via Port Limon and Habana.
Feb. 19	Colombia	N. O. & S. A. S. S. Line	Port Limon.

[17] Tug and Eagle *No. 32.* [18] Submarine. [19] And barge *Mamei.* [20] And barge *Darien.* *Other than ships passing through the Canal.

PORT OF BALBOA.

Feb. 14	Pacific Fleet	United States Navy	Valparaiso.				
Feb. 18	Tokuyo Maru	Toyo Kisen Kaisha	Hongkong.				

New Record for Cargo Voyage from New York to Los Angeles.

According to a statement issued by the Luckenbach Steamship Company, the steamer *Walter A. Luckenbach*, which passed through the Canal on January 25, completed the voyage from New York to Los Angeles in 15 days and 4 hours. The vessel sailed from New York on January 19 and arrived at Los Angeles on February 3. The distance is 4,930 nautical miles—1,974 miles from New York to the Canal, 43 miles through the Canal, 2,913 miles from the Canal to Los Angeles. Passage over the route in 364 hours was at an average speed of 13½ knots. The vessel was in Canal waters 12 hours and 30 minutes, and actual transit time, between Canal terminals, was 6 hours 35 minutes.

The *Julia Luckenbach*, as reported in THE PANAMA CANAL RECORD of January 26, established a record voyage for a freighter between Philadelphia and Los Angeles, of 15 days 22 hours, in December, 1920. The distance was 4,902 miles, accomplished at an average of 12-5/6 knots.

The *Walter A. Luckenbach* is a vessel of 8,051 gross and 5,973 net tons, registry measurement, 446.5 feet in length by 56.1 feet beam. She was carrying 7,162 tons of general cargo at time of transit through the Canal.

Record Voyage from Boston to Los Angeles.

The American-Hawaiian Line has announced that the steamship *Texan*, which passed through the Canal on January 9, bound from Atlantic to Pacific in the United States coastwise trade, completed the voyage from Boston to Los Angeles in 17 days, 21 hours. This is believed to be the record for a freight steamer between these ports. The distance is 5,113 nautical miles. The average speed for the 429 hours of the voyage was 11.92 knots.

The *Texan* is reported to have left Boston on January 1. She reached the Atlantic entrance of the Canal at 3.10 a. m., January 9; entered the Canal at 7.30 a. m.; reached Balboa at 3.35 p. m.; and cleared for sea at 4.28 p. m. She had been in transit 8 hours and 5 minutes, and in Canal waters 13 hours and 18 minutes. She reached Los Angeles on January 19.

The *Texan* is 471 feet in length by 57.2 feet beam, of 8,165 gross and 5,636 net tons, registry measurement. At time of passage through the Canal on January 9 she was carrying a general cargo of 3,320 tons.

Hawaiian Islands Service of Isthmian Steamship Lines.

The Isthmian Steamship Lines, now operating a line between New York and Pacific ports as far north as Vancouver, have announced the establishment of additional service for direct shipments to Honolulu from the eastern seaboard. Vessels will sail from New York for Los Angeles, San Francisco, and Honolulu, returning in reverse order. The *Montgomery City*, now loading in New York, is to be the first vessel over the route, and subsequent sailings are to be about every 30 days.

Four Hundred and Fifty Tons of Chrysanthemum Seeds.

An item in the cargo of the American steamship *Chipchung*, of the Barber Line, passing through the Canal on January 4, from China and Japan to Cuban and United States ports, with 5,700 tons of general cargo, was 450 tons of chrysanthemum seeds, shipped from Kobe to Baltimore.

German Service to Begin in March.

Announcement has been made in the press that, beginning with a sailing from Hamburg on March 5, the Kosmos Line, with home offices in Hamburg, and the Roland Line, with home offices in Bremen, will operate a service between German ports and Peruvian and Chilean ports, with monthly sailings.

The Kosmos Line sent a chartered Danish steamer, the *Alssund*, through the Canal on September 5, 1920, on the way from Puntarenas, Chile, to Hamburg.

Projected Visit of Members of Mississippi Valley Association.

Advice has been received that a party of members of the Mississippi Valley Association, with their wives, will arrive at the Canal about March 20 on the steamship *Metapan*. The Association, which is affiliated with the chambers of commerce of the principal Mississippi Valley cities, is arranging a tour of the Gulf and Caribbean areas as a means of establishing personal contacts in trade development. The party is expected to include over 100 persons.

Amendment to Tariff No. 4.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., February 19, 1921.

To all concerned—The following amendment is made to Panama Canal Tariff No. 4, Schedule of Rates for Supplies and Services Furnished to Shipping and Allied Interests at the Panama Canal:

ITEM 18.—STEVEDORING AND TRANSFERRING CARGO.

7. (Additional)—When cargo is handled to or from ship and work is prevented by rain, the laborers engaged upon such work will be held for work after rain ceases, at the discretion of the Receiving and Forwarding Agent. A charge for such labor for all time held after 30 minutes, will be made against the vessel unless the master or agent, prior to the expiration of 30 minutes from time of discontinuing work, requests that work be discontinued for the balance of the shift.

JAY J. MORROW,
Acting Governor, The Panama Canal.
Second Vice President, Panama Railroad Company.

(NOTE—The above addition will be included in Supplement No. 4 to Tariff No. 4, when this supplement is issued.)

Changes to Tariff No. 4.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY.
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., February 15, 1921.

To all concerned—The following changes are made to Tariff No. 4, Schedule of Rates for Supplies and Services Furnished to Shipping and Allied Interests at the Panama Canal:

ITEM 21—COAL.

Effective March 1, 1921.

	Cristobal-Colon.	Balboa.
1. For steamships, including warships of all nations, delivered from coaling plants or alongside of vessels in lighters or in cars on the wharves and trimmed in bunkers, per ton of 2,240 pounds, except as provided in paragraph 2	$15.00	$17.00
2. For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting transit		15.00
3. To steamships taking less than carload lots from plants, or less that 25 tons from lighters	16.50	18.50

	Cristobal-Colon.	Balboa.
4. When request is made by commander of vessels, chief engineer, or agent, for trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, an additional charge of 90 cents per ton will be made for extra handling.		
5. For lump coal for galley use, delivered in sacks, additional charge per ton, $10. Should the vessel furnish satisfactory sacks, the price will be only $3 per ton additional. Not more than 5 tons will be supplied to a vessel.		
6. For coal for cargo which will be delivered only in exceptional cases after special authority is given by the Governor....	$17.50	$19.50

ITEM 28—MEDICAL AND HOSPITAL TREATMENT.

Effective February 15, 1921.

4. Visit of physician to vessel alongside dock, $5; to vessel in harbor at anchor, or transiting the Canal, $10; to vessels at outer anchorage, Balboa, $25; except for visits to two or more in same family, or to two or more members of crew, in which case full price will be charged for first, and $2.50 for each additional patient. Launch service, for such visits, *after* first hour, will be charged for at rate of $3 for each half hour or fraction thereof.

JAY J. MORROW,
Acting Governor, The Panama Canal.
Second Vice President, Panama Railroad Company.

(NOTE—The above changes will be included in Supplement No. 4 to Tariff No. 4, when this supplement is issued.)

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended February 19:

U. S. S. *Dahlgren*, small miscellaneous S. E. repairs; U. S. subchaser *No. 284*, docking and miscellaneous repairs; U. S. S. *Tacoma*, miscellaneous pipework and repairs to ice machine; U. S. S. *Wm. Jones*, small miscellaneous S. E. repairs; yacht *Gloriana*, manufacture and installation of skeg fitting and miscellaneous repairs; steamship *S. V. Harkness*, repairs to steam lines and feed heater; tender *Perico*, docking, staging, cleaning, painting, and miscellaneous repairs; U. S. S. *Mallard*, repairs to main engine, feed heater, and generators; U. S. S. *Wyoming*, repairs to main turbines and refrigerating system; U. S. S. *Pennsylvania*, cut, roll, and flange 24 plates; U. S. S. *Mason*, renew starboard propeller guard; tug *Bohio*, general repairs and rebuilding; steamship *Sussex*, heavy accident repairs and docking, cleaning, and painting; U. S. S. *New Mexico*, repairs to main engines and ammunition hoists; barges *Nos. 134* and *135*, general repairs; steamship *Caddo*, heavy repairs; launch *Pilot*, general repairs; steamships *Caribbean*, general repairs; *St. Louis*, repairs to anchor windlass; U. S. S. *Iuka*, miscellaneous small repairs; U. S. S. *Sapelo*, examination where damaged and repairs to instruments; steamship *Osaqumsick*, manufacture 4 piston rings; launches *Santa Rita*, rebuilding; *Captain Wilhelm*, hull repairs and installation of new engine; U. S. S. *Ontario*, miscellaneous steam engineering repairs; steamship *H. M. Flagler*, services of diver; U. S. S. *Vireo*, repairs to refrigerating system; U. S. S. *Sonoma*, miscellaneous small repairs; U. S. S. *Contocook*, miscellaneous minor repairs; U. S. S. *Carrabassett*, repairs to boilers and refrigerating system; U. S. S. *Cuyama*, minor S. E. repairs; U. S. S. *Idaho*, manufacture 2 circular plates; U. S. S. *Semmes*, manufacture 1 worm gear; U. S. S. *Orion*, temporary repairs to shell plating; U. S. S. *New York*, crane service.

The following vessels were at the Cristobal shops for repairs during the week ended February 21:

Steamships *Ulysses*, *Achilles*, *General G. W. Goethals*, barges *Mamei* and *Darien*, miscellaneous repairs and painting to engine, deck, and steward departments; steamships *North American*, repairs to hull, clean and paint hull, etc.; *Peru*, overhaul steering engine, ballast pump, etc.; *Barima*, manufacture 8 brackets complete as per sample; launch *Tamarack*, miscellaneous repairs, paint hull above water line and superstructure; steamships *Tivives*, braze flange on copper pipe and anneal; *Laura C. Hall*, make one valve and stem complete; launches *Capron*, repair hull, sheathing, engine and pump, etc.; *McKee*, repair hull and engine; *Putnam*, repairs to hull, wheel, and shaft as directed; barge *No. 19*, scale and paint, miscellaneous repairs; U. S. A. T. *St. Mihiel*, U. S. N. coal barge *No. 316*, steamships *Pastores*, *George W. Barnes*, U. S. S. *Harding*, U. S. S. *Murray*, steamships *Parismina*, *West Norranus*, and dredge *No. 86*, miscellaneous repairs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending February 19, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Cauca	Pacific Steam Navigation Co	.....	February 13	.....	308
P. de Satrustegui	Spanish Line	February 13	February 13	322	25
Advance	Panama Railroad Steamship Line	February 13	February 16	1,011	42
Europa	Italian Line	Fcbruary 13	February 16	280	(2)
Haiti	French Line	February 13	February 17	217	234
Parismina	United Fruit Co	February 15	February 17	693	105
Ulysses	Panama Railroad Steamship Line	February 15	February 18	11,998	(2)
Mamei [1]	Panama Railroad Steamship Line	February 15	February 18	7,093	(2)
Barima	Pacific Steam Navigation Co	February 15	.....	196	.....
Turrialba	United Fruit Co	February 16	February 16	½	3
Sixaola	United Fruit Co	February 16	February 17	590	153
Glen White	C. Curran & Bullitt	February 16	February 17	8,086	(2)
Rosana	A. Fait	February 16	February 18	181	(2)
Allianca	Panama Railroad Steamship Line	February 16	.....	3½	.....
Geo. W. Barnes	Pan.-American Petroleum Co	February 17	February 18	9,429	(2)
Colon	Panama Railroad Steamship Line	.....	February 18	.....	1,033
Pastores	United Fruit Co	February 18	February 19	2	173
Jan Van Nassau	Royal Dutch W. I. Mail	February 18	.....	18	.....
Camito	Elders & Fyffes Line	February 19	February 19	40	1
Newport	Pacific Mail Steamship Co	.....	February 19	.....	1,481
Achilles	Panama Railroad Steamship Line	Februray 19	.....	12,031	.....
Darien [1]	Panama Railroad Steamship Line	February 19	.....	7,465	.....
Huasco	Chilean Steamship Co	February 19	.....	546	.....
Quilpue	Pacific Steam Navigation Co	February 19	.....	240	.....
Peru	Pacific Steam Navigation Co	February 19	.....	459½	.....

[1] Barge. [2] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending February 19, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Laura C. Hall	Pacific Metals Corporation	February 13	February 13	5	.....
Laura C. Hall	Pacific Metals Corporation	February 16	February 16	.....	42
Sapelo	United States Government	February 13	February 16	10,000	.....
Tokuyo Maru	Toyo Kisen Kaisha	February 18	February 19	290	.....
City of Alameda	United States Shipping Board	February 17	.....	8,900	.....
Newport	Pacific Mail Steamship Co	February 19	February 19	7	1
Peru	Pacific Steam Navigation Co	February 19	February 19	74	.....
Quilpue	Pacific Steam Navigation Co	February 19	February 20	6	.....

Summary of Hydrography, Calendar Year 1920.

CHAGRES RIVER.

A brief summary of hydrographic conditions for the calendar year 1920, is given below:

The mean discharge of the Chagres River at Alhajuela for the calendar year 1920 was 20 per cent below normal, or 2,062 c. f. s. against a 19-year average of 2,587 c. f. s. The Chagres River furnished 38 per cent of the Gatun Lake total yield.

The maximum monthly discharge at Alhajuela was 4,834 c. f. s., in October, and the minimum monthly discharge was 304 c. f. s., in April.

The maximum momentary discharge at Alhajuela during the year was 29,500 c. f. s. at elevation 103.20 feet on June 25, and the minimum momentary flow was 231 c. f. s. at elevation 90.17 on May 11.

GATUN LAKE.

The watershed total yield for the year was 12 per cent below normal, or 5,424 c. f. s. against a 10-year average of 6,183 c. f. s. The maximum monthly total yield was 16,291 c. f. s., during October, and the minimum total yield was 328 c. f. s., in April.

The total yield in the watershed amounted to 171.54 billion cubic feet, accounted for as follows:

	Per cent.	Billion cubic feet.
Run-off above Alhajuela	38	65.20
Yield from land area below Alhajuela	44	74.96
Direct rainfall on lake surface	18	31.38
Total	100	171.54

This is $\frac{171.54}{192.3}$ = 89 per cent of the Gatun Lake capacity at elevation 87 feet above sea level.

The uses and distribution of this water supply are given below:

	Per cent.	Billion cubic feet.
Evaporation from lake	[1] 13	22.40
Gatun Lake lockages	[1] 12	20.86
Hydroelectric power	26	44.42
Spillway waste	47	81.00
Leakage and miscellaneous uses	1.8	2.46
Increased storage	0.2	.40
Total	100	171.54

[1] It will be noted that the amount of water lost in evaporation exceeds that used in lockages.

With no inflow the various uses and losses during the year would have lowered Gatun Lake as follows:

	From elevation.	To elevation.
	Feet.	*Feet.*
Canal lockages	87	82.4
Hydroelectric power	87	77.0
Spillway waste	87	67.4
Evaporation	87	82.1
Total losses	87	31.1

With no losses the various sources of inflow would have raised the lake as folllows:

	From elevation.	To elevation.
	Feet.	*Feet.*
Direct rainfall on lake surface	80.1	87
Run-off from land area	47.5	87
Total net yield	43.5	87

or the total net yield was equal to 78 per cent of the capacity of Gatun Lake at elevation 87 feet.

There were lockages as follows during the year:

	Lockages.	Per cent over 1919.
Gatun	2,831	12.3
Pedro Miguel	3,055	11.6
Miraflores	3,041	12.3

Weather Conditions in January, 1921.

The January rainfall was generally below normal except at Taboga, Balboa, Darien, Monte Lirio, Cucherbo, Gatun River, Quipo, Caño, and Boqueron; the rainfall, although rather unusual, has been exceeded several times at nearly every station hitherto; particularly was this true in 1909, 1910, and 1915. Totals ranged from 0.02 inch at Rio Grande to 6.74 inches at Cucherbo in the Trinidad Valley. The greatest amount of precipitation recorded on any one day was 1.80 inches at Monte Lirio on the 30th.

The estimated rainfall over Gatun Lake watershed was 2.52 inches compared with a 11-year mean of 1.80 inches; over the Chagres River watershed above Alhajuela it was 1.71 inches, compared with a 20-year mean of 3.01 inches.

The air temperature was below normal at Balboa Heights, Alhajuela, and Gatun, and above at Gamboa and Colon, the air pressure and sea temperature were slightly below normal while the daytime cloudiness was above; the relative humidity was above normal on the Pacific and below on the Atlantic.

The wind movement was above normal at Balboa Heights, Gatun, and Colon, and below at Sosa Hill, Pedro Miguel, and Gamboa. The evaporation was above normal, except over Gatun Lake surface at Gatun. Few fogs were observed at interior stations, all of which lifted or were dissipated by 8 a. m. Seismic tremors were recorded on the 9th and 20th.

Gatun Lake hydrology—Mean elevation of Gatun Lake, 86.51 feet; maximum, 86.98 feet on 1st and 2d; minimum, 86.10 feet on the 27th; evaporation from Gatun Lake surface, 6.073 inches; rainfall on Gatun Lake drainage basin, 2.52 inches; total yield from Gatun Lake watershed was 1.83 inches and amounted to 73 per cent of the rainfall.

Climatological conditions at the representative stations are summarized in the following table:

Stations.	Pressure (reduced to mean of 24 hours).	Temperature.					Mean relative humidity.	Precipitation.			Wind.				
		Mean.	Maximum.	Date.	Minimum.	Date.		Total inches.	Station average.	Days with .01 inch or more.	Total movement (miles).	Prevailing direction.	Maximum velocity in miles.	Direction.	Date.
Balboa Heights...	29.859	79.8	91	Jan. 25	68	Jan. 17	78.7	0.88	0.95	7	7,120	N.W.	27	N.	Jan. 15
Colon.....	29.874	81.1	87	Jan. 24	72	Jan. 17	77.1	1.31	3.69	19	12,002	N.	29	N.E.	Jan. 8
Gatun.....	.....	79.6	87	[1]Jan. 27	70	Jan. 3	....	2.01	2.88	19	7,291	N.	23	N.	Jan. 11
Gamboa....	.....	78.8	90	[2]Jan. 22	67	Jan. 17	....	.09	1.64	1	4,342	N.E.	26	N.E.	Jan. 16

[1] And 28. [2] And 23.

March Weather Probabilities.

The following weather conditions may be expected at the Canal entrances during the month of March, 1921. These predictions are based on the weather records at Cristobal and Balboa Heights for the last 13 and 15 years, respectively.

Winds—Dry season weather will prevail over the Isthmus throughout the month. There will be a continuation of February wind conditions with little change either in prevailing direction or average velocity. On the Atlantic Coast the prevailing direction will be north or northeast with an average hourly velocity of about 15 miles. The maximum velocity is not likely to exceed 35 miles per hour. On the Pacific Coast the prevailing direction will be northwest to north, with an average hourly velocity of about 11 miles. No winds above 30 miles per hour may be expected.

Rain—March is the month of least average rainfall on the Isthmus, and nothing more than an occasional light shower is probable. The 51-year average rainfall at Cristobal is 1.58 inches and the 22-year average at Balboa Heights is 0.62 inch.

Fog—No fogs are likely to occur at either Canal entrance, but occasional night or early morning fogs may be expected in the interior. The average number of nights with fog over the Gaillard Cut section of the Canal is four. All fogs will probably be light and may be expected to clear away before 8.30 a. m.

Temperature—The monthly mean air temperature should average about 81 degrees F. on the Pacific side, and about 80° F. on the Atlantic side. On the Atlantic side no temperature lower than 67° F. or higher than 88° F. may be expected, while on the Pacific side 65° F. to 96° F. are the extremes. The average daily range on the Pacific side is about 19° F. and on the Atlantic side about 7° F.

Relative humidity—The average relative humidity is about 73 per cent on the Pacific side and about 79 per cent on the Atlantic side. The range is greater on the Pacific side than on the Atlantic side on account of higher night humidity and lower midday humidity.

Storms—Fair weather may be expected on both coasts during March. The effects of "Northers" may occasionally be felt as far south as the Atlantic entrance, and intensified northwest trades frequently cause rough seas and a heavy swell outside the breakwater. At the Pacific entrance the sea will be smooth to moderate.

Tides—Tidal fluctuations on the Atlantic side are too small to effect navigation. Balboa tide predictions for month are given on page 407: These are taken from *Tide Tables for 1921* published by the Department of Commerce, Washington, D. C.:

Day of- W.	Day of- Mo.	Time and Height of High and Low Water.				Day of- W.	Day of- Mo.	Time and Height of High and Low Water.				Day of- W.	Day of- Mo.	Time and Height of High and Low Water.			
Tu	1	2:54	8:55	**3:14**	**9:17**	S	12	5:24	11:41	**5.42**	.....	W	23	3:01	9:24	**3:26**	**9:51**
		1.5	12.7	**2.6**	**12.8**			14.2	0.1	**14.9**	.....			15.4	-1.0	**16:1**	**-1.3**
W	2	3:51	9:50	**4:12**	**10:14**	S	13	0:00	6:02	**12:18**	**6:20**	Th	24	3:51	10:08	**4:14**	**10:35**
		2.4	11.8	**3.5**	**11.9**			-0.1	14.2	**0.3**	**14.9**			15.9	-1.4	**16.4**	**-1.7**
Th	3	4:50	10:57	**5:13**	**11:23**	M	14	0:39	6:40	**12:57**	**6:58**	F	25	4:39	10:52	**4:59**	**11:17**
		3.0	11.2	**4.0**	**11.4**			0.2	14.1	**0.8**	**14.6**			16.0	-1.5	**16.4**	**-1.7**
F	4	5:51	**12:08**	**6:17**	.....	Tu	15	1:22	7:22	**1:44**	**7:42**	S	26	5:26	11:34	**5:46**	**11:59**
		3.3	**11.2**	**4.1**	.....			0.6	13.8	**1.4**	**14.2**			15.8	-1.1	**16.0**	**-1.2**
S	5	0:30	6:52	**1:07**	**7:18**	W	16	2:12	8:09	**2:38**	**8:31**	S	27	6:11	**12:16**	**6:29**	.....
		11.5	3.2	**11.6**	**3.8**			1.1	13.3	**2.0**	**13.6**			15.3	-0.3	**15.4**	.....
S	6	1:24	7:49	**1:55**	**8:12**	Th	17	3:10	9:04	**3:41**	**9:37**	M	28	0:42	6:54	**12:59**	**7:11**
		11.8	2.8	**12.2**	**3.1**			1.6	**12.8**	**2.5**	**13.1**			-0.4	14.6	**-0.8**	**14.5**
M	7	2:10	8:37	**2:36**	**8:58**	F	18	4:15	10:14	**4:48**	**10:49**	Tu	29	1:28	7:38	**1:47**	**7:54**
		12.4	**2.1**	**12.9**	**2.3**			1.9	12.5	**2.6**	**12.9**			0.6	13.7	**1.9**	**13.5**
Tu	8	2:52	9:19	**3:15**	**9:37**	S	19	5:22	11:33	**5:57**	.....	W	30	2:17	8:23	**2:39**	**8:38**
		12.9	1.4	**13.5**	**1.4**			1.8	12.8	**2.3**	.....			1.7	12.7	**3.0**	**12.5**
W	9	3:31	9:57	**3:52**	**10:14**	S	20	0:06	6:30	**12:43**	**7:06**	Th	31	3:12	9:13	**3:39**	**9:32**
		13.4	0.8	**14.1**	**0.7**			13.2	1.4	**13.6**	**1.6**			2.7	11.9	**3.8**	**11.6**
Th	10	4:09	10:32	**4:29**	**10:49**	M	21	1:11	7.35	**1:48**	**8:08**						
		13.8	0.3	**14.5**	**0.2**			13.9	0.7	**14.6**	**0.6**						
F	11	4:46	11:06	**5.05**	**11:24**	Tu	22	2:09	8:33	**2:36**	**9:02**						
		14.1	0.1	**14.8**	**-0.1**			14.8	-0.2	**15.4**	**-0.4**						

The tides are placed in the order of their occurrence; the *times* of high and low tides are shown on the upper lines. The figures in boldfaced type are hours and elevations between noon and midnight; *ante meridian* figures are given in the ordinary lightfaced type. The time is Cosmopolitan Standard for the meridian 75° W.

The *elevations* of the water are shown on the second line for each day; a comparison of consecutive heights will indicate whether it is high or low water. Heights are reckoned from mean low water springs, which is 8.3 below mean sea level and is the datum of soundings on the Coast and Geodetic Survey charts for this region. The depth of water may accordingly be estimated by adding the tabular height of the tide to the soundings, unless a minus (—) sign is before the height, in which case it is to be subtracted. The annual inequality or variation in the mean sea level is included in the predictions.

Automobiles and Motorcycles.

The following summary of motor vehicles licensed in the Canal Zone has been furnished by the Chief of the Division of Civil Affairs:

At the end of December, 1920, there were 1,811 automobiles and trucks, and 353 motorcycles licensed in the Canal Zone, as compared with 1,401 and 269, respectively, on February 29, 1920.

Automobile licenses are divided into three classes—for pleasure only, for hacking, or carrying passenges for hire, and for trucking. Of the 1,811 automobiles and trucks licensed, 623 were for official cars belonging to The Panama Canal, the Panama Railroad Company, and the United States Army and Navy, and 28 were reciprocal licenses for official cars belonging to the Republic of Panama, as compared with 501 and 21, respectively, on February 29, 1920.

Of the 1,160 remaining, 450 were for personal licenses, 49 were hacking licenses, and 2 were trucking licenses issued to residents of the Canal Zone, as compared with 308, 41, and 2, respectively, on February 29, 1920; 133 and 63 were reciprocal personal licenses issued to residents of Panama and Colon, respectively; and 361 and 102 were reciprocal commercial licenses issued to persons living in Panama and Colon, respectively. The total of reciprocal licenses of all classes in effect at the end of December, including official licenses, was 687, as compared with 549 on February 29, 1920. Of the 463 reciprocal commercial licenses above mentioned, 416 were for hacking, or carrying passengers for hire, and 47 for trucking.

Of the 353 motorcycles licensed, 203 were for official machines belonging to the United States, and 1 was a reciprocal license for an official machine belonging to the Republic of Panama. Of the 149 remaining, 128 were personal licenses issued to residents of the Canal Zone, 13 were reciprocal personal licenses issued to residents of the City of Panama, and 8 were reciprocal personal licenses issued to residents of Colon. On February 29, 1920, there were 269 motorcycles licensed in the Canal Zone, of which 142 were official licenses for machines owned by the United States, 1 a

reciprocal license for a machine owned by the Republic of Panama, 111 personal licenses issued to residents of the Canal Zone, 8 reciprocal personal licenses issued to residents of the City of Panama, and 7 reciprocal licenses issued to residents of Colon.

The fees for Canal Zone motor vehicle licenses when the vehicles are owned by residents of the Canal Zone are as follows:

For each passenger automobile for personal use only, $5.
For each automobile of 29 horsepower or less, used for carrying passengers for hire, $20.
For each automobile of more than 29 horsepower, used for carrying passengers for hire, $30.
For each truck or omnibus of 1-ton capacity or less, $20.
For each truck or omnibus of a capacity of more than 1 ton but less than 3 tons, $30.
For each truck or omnibus of a capacity of 3 tons or more, $40.
For each motorcycle, $2.

The fees for reciprocal Canal Zone licenses for cars owned by residents of the Republic of Panama are as follows:

For each passenger automobile for personal use only, $1 per year.
For each automobile used for carrying passengers for hire, $12.50 per year.
For each truck or omnibus, $15 per year.
For each motorcycle, $1 per year.

A resident of the Canal Zone procures his original license in the Zone, and is granted the reciprocal rate in Panama or Colon upon the submission of the receipt for the Canal Zone license. The same holds good in the Zone for residents of Panama or Colon who have obtained the original license in Panama territory. Canal Zone licenses are issued by the Division of Civil Affairs, Balboa Heights, and no fee is accepted for less than the calendar year unless more than one-quarter has expired when the license is taken out, in which case the license fee is proportioned to the part of the calendar year remaining, including therein the calendar quarter in which the license is paid.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z. (telephone Balboa 286):

Apprentice chart engraver, $600 to $1,000 a year (male and female); form 304; announcement No. 117; age, 16 but not 20 years; vacancies exist in the Coast and Geodetic Survey; March 22, 1921.[1]

Engineer, $2,400 or over a year; assistant engineer, $1,800 to $2,340 a year; junior engineer, $1,440 to $1,740 a year (male and female); form 1312; announcement No. 114; age, 25 but not 55 years; vacancies exist in the Water Resources Branch of the Geological Survey; July 1, 1921.[1]

Girls' athletic director, $900 to $1,000 a year (male and female); form 1312; announcement No. 113; age, 21 but not 45 years; vacancies exist in the Indian Service at Sherman Institute, Cal.; March 15, 1921.[1]

Mold maker's helper, $720 to $1,000 a year (male and female); form 1800; announcement No. 112; age, 18 but not 50 years; vacancies exist in the Bureau of Standards, Department of Commerce, Washington, D. C.; March 15, 1921.[1]

Physician, Panama Canal Service; announcement No. 641-amendment; training and experience requirements changed.

Physician, $250 to $360 a month (male and female); form 1312; announcement No. 641; age, 22 but not 31 years; vacancies exist in The Panama Canal Service; March 12, 1921.

[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings, or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Isaac Fraser	25042	Jamaica	Folks River	Panama Railroad	Feb. 16, 1921.
Cyril Holder	30354	Barbados	Panama	Health Department	Feb. 10, 1921.
Reginald Ethelbert Myrie	55842	Jamaica	Colon	Mun. Eng. Div	Feb. 6, 1921.
Walter B. Smith	1434	United States	Pedro Miguel	The Panama Canal	Feb. 16, 1921.

Official Circulars.

Culebra Road a One-Way Street.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 11, 1921.

To all concerned—That section of Culebra Road, Ancon, between Gorgas Road and House No. 284, is hereby declared a 1-way street for vehicular traffic, with direction running uphill from the junction of said road with Gorgas Road toward House No. 284.

JAY J. MORROW,
Acting Governor.

Removal of Fire Extinguishers.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 14, 1921.

To all concerned—The attention of this office has been called to the fact that fire extinguishers, the property of the Police and Fire Division, have at times been removed by employees of other divisions from the locations where placed by employees of the Fire Division. This practice is strictly against all rules and regulations and a continuation thereof is liable to result in serious damage in case of fire at points where these extinguishers have been located.

Officials and employees are cautioned not to remove fire extinguishers without being so authorized by the proper officials of the Fire Division, and any violation of the rules and regulations in this respect will result in severe disciplinary action being taken.

JAY J. MORROW,
Acting Governor.

Witnessing Signatures to Income Tax Returns.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 10, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

In connection with the submission of income tax returns, the blanks for which are being distributed, it is requested that you permit notaries public in your departments or divisions to witness signatures to such returns for employees during office hours, or at some specified period during the day when it may not interfere too much with their official duties.

C. A. MCILVAINE,
Executive Secretary.

Report on Probationary Service.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., December 30, 1920.

HEADS OF DEPARTMENTS AND DIVISIONS:

The following circular letter "Report on Probationary Service," issued by the United States Civil Service Commission, under date of October 28, 1920, is quoted for your information:

"Clause (c) of section 1 of Civil Service Rule VII provides that retention in the service of a probationer beyond the probationary period constitutes absolute appointment, following a provision that if the conduct or capacity of the probationer be not satisfactory to the appointing officer he shall be so notified in writing with a full statement of reasons and such notice shall terminate his service.

"The Civil Service Act requires that there shall be a probationary period before any absolute appointment. The entrance examination determines whether the applicant is entitled to trial, but the period of probation affords a practical test and is itself the final step of the examination. The character of the service rendered by the probationer and his fidelity and business capacity should be carefully observed, as the appointing officer manifestly must be the final judge of the qualifications and character of the person who may be employed.

"The small number of persons dropped from the service during or at the end of probation has convinced the Commission that the reason underlying the requirement of a probationary period has not received the consideration its importance deserves, and that this very essential practical test has not guarded the service against the incompetent or the otherwise unfit as it should. The practice prevailing in some of the bureaus and offices of requiring a definite report and recommendation from the probationer's immediate superior and not permitting the appointment to become absolute passively is doubtless of some effect.

"This is in harmony with the finding and recommendation of the Congressional Joint Commission on Reclassification of Salaries. The following is quoted from this report:

'The Commission believes that a more thorough and effective use should be made of the probationary period, and that the law should be so changed that probationary appointments could become permanent only by a definite administrative decision.

'Recommendation 17 (b)—The Commission therefore recommends that administrative officials be required to submit to the Civil Service Commission such reports regarding the efficiency of probationary appointees as the Commission may require, and that no permanent appointment be made except on certificate by the Commission that the employee has satisfactorily passed his probationary period.'

"The Commission desires to impress very forcibly upon the departments the fact that no probationary appointment should be allowed to become absolute unless the character of service and conduct of the probationer has been entirely satisfactory, and the department can certify unconditionally that his retention is believed to be in the interest of the service.

"It seems that this matter should preferably be handled administratively and that legislation is unnecessary. Rule XIII, section 1, requires every nominating and appointing officer to report in detail to the Commission in such manner as it may prescribe all changes in the service under his authority. The Commission requests under this authority report of each absolute appointment over a certificate that the character of service and conduct of the person during probation were entirely satisfactory, and that his retention in the interest of the service is believed to be warranted."

In the future, you will be advised of the termination of the probationary period in the case of any employee under your supervision, in order that the necessary report may be made to this office, if it is desired that such appointment be made permanent.

By direction of the Acting Governor.

C. A. MCILVAINE,
Executive Secretary.

Dispatch of Private Cable and Radio Messages from Balboa Heights.

PANAMA RAILROAD COMPANY,
OFFICE OF MASTER OF TRANSPORTATION,
BALBOA HEIGHTS, C. Z., February 7, 1921.

CIRCULAR NO. 1741:

To all concerned—Effective with the close of business to-day, the position as telegrapher and car record clerk in the train dispatcher's office, Administration Building, is abolished.

All cable and radio business heretofore handled on that desk will be taken care of at Balboa Heights railroad station.

Official business telegrams will be handled by the train dispatcher.

W. F. FOSTER,
Master of Transportation.

Annual Passes on Panama Railroad.

PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., February 16, 1921.

To all concerned—On and after February 23, 1921, the 1920 card passes on the Panama Railroad will not be honored for transportation. The card passes for the year 1921, which are now being distributed, will be honored effective at once.

W. F. FOSTER,
Acting Superintendent.

Acting Steamship Ticket Agent.

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., February 11, 1921.

To all concerned—Effective February 12, 1921, and during the absence of Mr. Frederick Grunewald, Jr., on leave, Mr. Jonas E. White will act as steamship ticket agent of the Panama Railroad Company.

ROBT. BEVERLEY,
Assistant to Superintendent.

Approved:
W. F. FOSTER,
Acting Superintendent.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., February 14, 1921.

Insufficiently addressed mail matter for the following has been received in the office of the Director of Posts and may be obtained upon request of the addressees. Request for forwarding may be made by telephone, calling No. 182, Balboa.

Armitage, R. C.
Baily, Richard
Bartha, Mrs. James
Beers, W. H.
British and American S. S. Agencies
Brown, Robert H.
Bull, Mrs. M. E.
Cannon, G. L.
Cavanaugh, Frank
Clark, Floyd
Conn, William
Craven, Thomas R.
Crawford, Dacas
Crowley, Capt. Arthur
Da Costa, Rhoda
Delaney, Florence
Deneen, Jack
Dougherty, Mrs. I.
Down, Mildred
Evans, Joseph A.
Farquahan, Mrs. M. F.
Ferguson, R. N.
Finlayson, Wm.
Gann, LeRoy
Goram, Ruth
Goulsters, Arthur John
Grote, Herbert
Henbey, Clara
Howell, Wilford
Johnson, Mrs. W. O.
Jones, Mrs. R. E.
Kelly, Wm. O.
Kieswetter, Ernest M.
Kindness, Floyd F.
King, P. R.
Lailer, William F.
Lambert, Peter J.
Lange, Mrs. E. C.
Latin American Ship. Agency
McCathy, L. R.
McGoldrick, Hugh
Malo, Mrs. Jean Batis
Marquard, Mrs. Rose
Matson, Mrs. J. M.
Miller, Sam
Miller, Tom
Monahan, J. G.
Morales, A.
Paulsen, J. N.
Pearsons, Mrs. B.
Penfold, H. J.
Picon, Jose Maria Vivee
Poole, George D.
Powell, Ren. N. M.
Pryor, Mrs. D. H.
Putnam, John H. S.
Quick, Mrs. J. T.
Ratcliff, John
Reams, C. A.
Roselsky, Miss D., Box 594
Rowe, Mrs. Mary
Russell, James G.
Sanborn, Mrs. H.
Shomberg, A. G. (F.)
Smith, Barney J.
Sperry, S. W.
Steiner, C. H.
Stevens, Lester V.
Stover, H. B.
Ude, William C., Jr.
Tweed, Ula
U. S. A. Corporation (D. J. McLean).
Vain, Gilman
Walsmith, Harry
Walters, Mrs. L. M.
Wesendorff, Lottie Spell
White, Mrs. Anna
Wikoff, Marion O.
Williams, D. T. M.
Wilson, Mrs. E. S.
Wilson, Mrs. E. L.
Wobler, F. J.
Woelffshan, J.

Sailing of the "General G. W. Goethals."

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., February 17, 1921.

To all concerned—The steamship *General G. W. Goethals* will sail from Cristobal for New York, via Haiti, on Monday, February 28, at 3 p. m.

W. F. FOSTER,
Acting Superintendent.

January Rainfall for Three Years.

STATIONS.	INCHES. 1919	1920	1921	Station average.	Years of record.	Rainy days, 1921.
Pacific section:						
Balboa	0.13	T	1.49	1.00	22	7
Balboa Heights	.28	T	.88	.95	23	7
Miraflores	.16	.03	.26	1.48	13	3
Pedro Miguel	.48	.03	.04	1.00	14	1
Rio Grande	.64	.03	.02	1.02	17	1
Central section:						
Culebra	.62	.05	.03	1 47	31	1
Camacho	1.03	.22	.12	.91	15	1
Empire	.50	.15	.15	.70	16	3
Gamboa	.55	.05	.09	1.64	37	1
Juan Mina	.97	.16	.23	.63	11	2
Alhajuela	.75	.52	.18	.96	22	7
Vigia	.93	.24	.17	.72	13	6
Frijoles	1.61	31	2.50	1.79	10	5
Trinidad	2.47	.60	1.52	2.52	14	19
Monte Lirio	4.03	.37	3.32	2.72	14	18
Atlantic section:						
Gatun	1 42	.71	2.01	2 88	17	19
Brazos Brook	2.48	.30	1.89	2.86	15	14
Colon	1.82	.51	1.31	3.69	51	19
Porto Bello	4.31	2.52	4 21	5.85	10	22

Rainfall from January 1 to January 31, 1921, Inclusive.

STATIONS.	Maximum in 1 day.	Date.	Total.
Pacific section:	*Ins.*		*Ins.*
Balboa	0.84	25	1.49
Balboa Heights	.60	25	.88
Miraflores	.15	21	.26
Pedro Miguel	.04	1	.04
Rio Grande	.02	1	.02
Central section:			
[1] Culebra	.03	29	.03
[1] Camacho	.12	29	.12
Empire	.13	28	.15
Gamboa	.09	28	.09
[1] Juan Mina	.21	29	.23
Alhajuela	.10	28	.18
[1] Vigia	.05	29	.17
[1] Darien	.44	27 & 28	1.67
Trinidad	.27	29	1.52
[1] Monte Lirio	1.80	30	3.32
Atlantic section:			
Gatun	.37	20	2.01
[1] Brazos Brook	.48	30	1.89
Colon	.32	8	1.31
[2] Bocas del Toro	.....	.....	.....
[1] Porto Bello	.60	28	4.21

[1] Standard rain gauge—readings at 5 p. m. daily.
Automatic rain gauge at unstarred stations—values midnight to midnight.
[2] Standard rain gauge—readings at 8 a. m. daily.

Eggs for Setting.

For a limited period only purchases of eggs for setting may be made at the Summit poultry farm at the following prices:

White Leghorn or Rhode Island Red, per setting of 15 eggs, $3; two settings, or 30 eggs, $5.50.

All sales f. o. b. Summit.

Sale of Laying Mash.

The Summit Poultry Farm has on hand about 6,000 pounds of laying mash, in excess of the amount required, which is offered for sale at $7.42 per cwt. f. o. b. Summit poultry farm. Orders should be placed on the Superintendent of the Cattle Industry Division, Cristobal.

Sale of Gasoline Launch.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, up to 10.30 a. m., March 7, and then opened, for the purchase of the gasoline launch *Pioneer*. Detailed information and form of proposal may be had upon application to the office of the Chief Quartermaster. The Panama Canal reserves the right to reject any or all bids.

Sale of Rough Granite.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., February 28, and then opened, for the purchase of 12 pieces of rough granite. Detailed description of this granite, general condition of sale and form of proposal may be had upon application to the office of the Chief Quartermaster.

Sale of Equipment on Hand at the Old Power and Refrigerating Plant, Commissary Division, Cristobal.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., April 12, 1921, and then opened for the purchase of various ice machinery, electrical generators, pumps, etc., on hand at the old power and refrigerating plant, Commissary Division, Cristobal. Form of proposal may be had upon application to the office of the Chief Quartermaster, or the General Manager, Commissary Division. The Panama Canal reserves the right to reject any or all bids.

Sale of Brown Hoist at Cristobal.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., April 4, 1921, and then opened, for the purchase of a "Fast plant" for handling coal and general merchandise, manufactured by the Brown Hoisting Machinery Co., Cleveland, Ohio. This plant has been used by the Panama Railroad Company at Cristobal for handling coal since 1906, and is now located at Dock 14, Cristobal, C. Z. The plant is no longer required and bids are solicited for the entire hoisting plant, including all parts above the rails on which it now stands, together with all spare parts now on hand which were purchased for use of this plant. Detailed description and form of proposal may be had upon application to the office of the Chief Quartermaster. The Panama Canal reserves the right to reject any or all bids.

Additions to Commissary Stock.

Boot and Shoe Section.

Heels, rubber, women's, military, white, pr.	$0.21
Shoes, growing girls' Oxfords, white canvas, ivory welt, low heel, sizes 1 to 7, pr.	4.35
Shoes, men's gunmetal bals, rubber heels, pr.	5.50
Shoes, men's mahogany bals, rubber heels, pr.	5.80
Shoes, women's, white canvas pumps, Louis heels, wht. welts, pair.	6.30

Dry Goods Section.

Cloths, table, linen, ea.	$6.35, $6.75, and $11.45
Cloths, table, cotton, Damask, 63″ x 63″, ea.	2.80
Cloths, table, cotton, Damask, 63″ x 80″, ea.	3.45
Cloths, tea, H. S., cotton, 36″ x 36″, ea.	1.05
Cloths, tray, Madeira linen, oblong, 18″ x 27″, ea.	3.75
Cloths, tray, Madeira linen, oval, 20″ x 30″, ea.	3.05
Cloths, tray, Madeira linen, oblong, 20″ x 30″, ea.	3.20, 3.75, and 4.25
Cloths, tray, Madeira linen, 20″ x 30″, ea	4.15
Cotton, absorbent, pkg.	.63
Dress goods:	
Silk, pongee, Shantung, natural, 32/33″, yd.	1.15
Silk, pongee, white, 20″, yd.	.93
Silk, pongee, blue and pink, 33″, yd.	1.75
Silk, pongee, natural, 33″, yd.	$1.00 and $1.45
Embroidery, Swiss, cotton cambric, yd.	.05 and .09
Fans, paper, Jap., ea,	.06, .09, .10, .13, and .14
Fans, silk, Jap, ea.	.30 and .32
Lace, footing, cotton, white, yd.	.05
Sets, table cloth and napkins, 24″, set	$14.35, $15.20, and $17.50
Stationery:	
Envelopes, plain white, 6¾″, 25s pkg.	.08
Envelopes, plain white, 4⅛″ x 5⅜″, 25s pkg.	.18
Suiting, English:	
Bleached union drill, yd.	1.00
All-wool worsted, yd.	6.10
Serge, blue, white stripe, yd.	6.20
Silk, pongee, natural color, 27/28″, yd.	2.05
Silk, pongee, Shantung, natural color, 27/28″, yd.	1.55
Robes, bath, boys', blanket, ea.	3.55
Suiting, duck, bleached cotton, linen finish, yd.	1.00
Suiting, coatings, black, yd.	6.15
Suiting, drill, bleached, 27″, union, yd.	1.00
Suiting, worsted, fancy, 54″, yd.	4.90
Suiting, Palm Beach, wool and cotton, 54″, yd.	2.20
Wash, mouth, Kolynos, bot.	.58

Grocery Section.

Biscuits, assorted, sweet, "Rich Mixed" (wholesale trade only), 3½-lb. tin.	1.70
Peppermint stick, Morton's, 5-lb. tins, 1-oz. stick	.04

Hardware Section.

Chinaware, Doulton, miscellaneous:	
Jars, tobacco, ball top, D-3416, ea.	2.55
Boats, gravy, with stand, D-2716, set.	2.80

Route Service Jitney—Cristobal-Mt. Hope.

The following is the schedule of the official jitney service between the Terminal building at Cristobal and Mount Hope. Cars stop at the office of the Commissary Division each way:

Leave Terminal Building.		Leave Mount Hope.	
A. M.	P. M.	A. M.	P. M.
8.00	12.30	8.15	12.45
8.30	1.00	8.45	1.15
9.00	1.30	9.15	1.45
9.30	2.00	9.45	2.15
10.00	2.30	10.15	2.45
10.30	3.00	10.45	3.15
	3.30		3.45

COMMISSARY NOTES.

Ribbon.

A small shipment of ribbons for the Easter trade has just arrived and is being sold in the line commissaries at prices ranging from 34 to 94 cents a yard.

Toilet.

A large shipment of French perfumes, lotions, and powders, attractively packed, has just been received and is being offered in all commissaries at very reasonable prices.

Bread.

Commissary customers will find that bread will keep longer in this climate without becoming moldy if, before putting the loaf away, they will open the ends of the wax paper container in which it is received instead of leaving it tightly sealed as it is when sold.

Electrical Appliance Guarantee.

Hereafter a guarantee card will be dated, signed, and delivered with each electrical appliance purchased in the commissary. If the apparatus develops defects within the period of 1 year from date of sale, the Electrical Division will make the necessary repairs; but all claims must be accompanied by the sale card, as otherwise they can not be entertained.

Books.

Books received:

"Mexico in Revolution," by Blasco Ibañez; "The Enemies of Women," by Blasco Ibañez; "The Vacation of the Kelwyns," by Wm. Dean Howells; "West Wind Drift," by George Barr McCutcheon; "In Chancery," by John Galsworthy; "My Unknown Chum," by "Aguecheek;" "Wounded Souls," by Philip Gibbs; "The Little Warrior," by P. G. Wodehouse; "The Ten-Foot Chain," by Achmed Abdullah; Max Brand; P. P. Sheehan; and E. K. Means.

Customers who have been collecting books of the Modern Library will be interested in knowing that the following new titles have just been received and distributed to the line stores:

"Green Mansions," by W. H. Hudson; "Marius, the Epicurean," by Pater; "Temptation of St. Anthony," by Flaubert; "Poems," by William Blake; "Marjorie Fleming's Book;" "Madam Crysantheme," by Pierre Loti; "The New Spirit," by Havelock Ellis; "Intentions," by Oscar Wilde.

and the following titles in the "Kings' Treasuries of Literature":

"The Adventures of Odysseus," retold from Homer; "Alpha of the Plough," selected essays from "Pebbles on the Shore," and "Leaves in the Wind," by Alfred G. Gardiner; "Bee, Princess of Dwarfs," by Anatole France, "A Child's Book of Saints," selections by William Canton; "Essay on Clive," by Lord Macauley; "The Heroes," by Charles Kingsley; "The Lay of the Last Minstrel," by Sir Walter Scott; "The Lore of the Wanderer," compiled by George Goodchild; "Modern Poetry;" "Sesame and Lilies," by John Ruskin; "Tales from Anderson," edited by Reed Moorehouse; "Tales from Tolstoy," "The Tragedy of Richard II," by Shakespeare; "A Wonder Book for Boys and Girls," by Nathaniel Hawthorne.

Important Changes in Delivery Service.

To effect further economy in the handling of deliveries, the vegetable peddle trucks now serving the Ancon, Balboa, and Cristobal districts will be discontinued after the close of this month. The sales made by these trucks are now so low that business can well be handled through the present solicitor and delivery system, with practically no additional expense, whereas at present it is costing a considerable sum for the equipment and labor thus employed, in addition to which must be reckoned the increased condemnation resulting through exposure of perishable goods to the warm air.

Another saving will be brought about by delivering grocery orders on the day following instead of on the same day they are taken. More important than the economy which will result will be the elimination of congestion and confusion in the order departments during the early afternoon hours. Under the present system cold storage sections are late in getting out their work; the change will enable the stores to give preference to cold storage orders which must necessarily be put up during the afternoon of the day they are received. This matter has been very carefully considered and the statistics show that the average number of deliveries per family per month is so low that no real inconvenience will be caused customers through the difference of a day in making grocery deliveries. However, as an accommodation to those who wish to place grocery orders totaling less than $5 and not desiring special delivery service, orders may be placed for whatever items are desired and they will be handled on regular delivery by the payment of a charge of 25 cents on each order.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates, domestic, $1.00 per year; foreign, $1.50; address The Panama Canal Record, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Volume XIV. Balboa Heights, C. Z., March 2, 1921. No. 29.

Repaired "Sussex" Loading to Complete Voyage.

The steamship *Sussex*, of the Federal Steam Navigation Company's service, which ran aground on the West Breakwater in Limon Bay in the night of January 3 while making for the Atlantic entrance to the Canal, has been repaired and is reloading cargo at Pier 18, Balboa, to complete her voyage to New Zealand ports. The work of drawing the *Sussex* off the breakwater took a week, and over 1,700 tons of cargo were removed from her Nos. 1 and 2 holds into lighters before the vessel could be pulled off by the tugs *Gorgona* and *Tavernilla* and the salvage steamer *Favorite* of The Panama Canal service. The *Sussex* was then taken through the Canal to go into dry dock in the 1,000-foot dock at Balboa, but could not get in until January 26, on account of the dock's being engaged ahead by other vessels. In the meantime she discharged her cargo on Pier 18.

As a preliminary to the dry-docking, the bottom of the *Sussex* was examined by a diver, to ascertain the extent of the damage and to see that no damaged portion of the hull would interfere with a proper landing on the keel blocks.

The damage itself extended from the forepeak to about the center of No. 1 hatch, approximately 45 plates have been removed, 36 of which were so badly torn or dented as to require renewal. A new section of stem from the scarph at the 26-foot line to the keel plate was forged and installed. All of the frames in the forepeak have been renewed and two frames in No. 1 hold renewed, the balance straightened and stiffened by the installation of new reverse bars. This describes only in a limited way the work required, as, in connection with this, a number of miscellaneous items must be handled at the same time, such as No. 1 tank top, margin plate, bilge brackets, stringers, breast hooks, collision bulkhead, etc.

Incident to this work the ship has been under special survey and has had all sea valves overhauled, tail shaft drawn for examination of the stern bearing, rudder lifted, steering gear overhauled, several pumps repaired, bilge and ballast lines to the No. 1 tank overhauled, deck winches and anchor windlass examined, cables ranged and inspected, rails straightened, and minor repairs in other respects on equipment or fittings which usually become more or less strained or damaged as a result of grounding and wrecking operations.

The completed vessel was withdrawn from the dry dock on February 21, and commenced reloading on that date.

The salvage and repair of the *Sussex* were similar in a general way to the recovery of the *Koyo Maru*, which ran aground on Serrana Bank, about 300 miles north of Colon on June 29, 1920, and was pulled off the reef and escorted to the Canal by the *Favorite*. The two cases have emphasized the value of the facilities maintained by the Canal for the assistance and repair of vessels in distress.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, February 26, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Chicago Maru	19	14.05	20	6.23	20	13.07	20	14.40	Japanese	Osaka Shosen Kaisha	410.0	51.0	19.0	New Orleans	Yokohama	General	810	6,123	4,282
Corinthic	19	14.15	20	6.25	20	15.09	20	16.15	British	White Star Line	500.0	63.0	24.8	London	Wellington	Cement	1,234	12,821	9,507
Ontario [1]	18	19.25	20	6.50	20	16.49			American	United States Navy	169.0	34.0		Cristobal	Balboa				
John Worthington	20	1.40	20	6.55	20	16.45	20	22.55	American	Standard Oil Co	478.0	60.0	27.6	Tampico	Pisagua	Fuel oil	11,000	8,491	6,096
Eastern Glen	20	3.15	20	8.20	20	17.07	20	18.25	American	Thorndijke & Trenholme (S. B.)	399.9	54.7	25.0	Norfolk	Tiburon	Coal	6,574	6,132	4,330
Blossom Heath	20	5.45	20	10.20	20	18.25	20	19.35	British	Steam Navigation Co. of Canada	400.0	52.0	28.6	Norfolk	Taltal	Coal	7,188	6,005	4,225
Steel Mariner	20	18.18	21	6.28	21	14.44	21	16.00	American	United States Steel Products Co.	424.2	56.2	25.0	New York	San Pedro	Steel, general	7,854	7,539	5,448
Eburna	20	7.14	21	6.30	21	13.54	21	15.25	British	Anglo-Saxon Petroleum Co	380.0	52.0	24.8	Port Arthur	Shanghai	Kerosene	6,850	5,222	3,611
Santa Rosalia	20	19.00	21	9.10	21	18.00	21	18.56	American	United States Steel Products Co.	406.0	52.6	24.1	Mobile	Kobe	General, steel	7,000	5,865	4,530
Eagle No. 4 [2]	18	15.37	21	10.00	21	17.56	21	18.20	American	United States Navy				Cristobal	Balboa				
Lake Fithian	21	12.07	22	6.15	22	13.56	22	18.00	American	N. O. & S. A. S. S. Co. (S. B.)	253.6	43.8	21.0	New Orleans	Guayaquil	Rails, coke, gen.	2,300	2,915	1,907
Gannett [3]	18	18.23	22	6.20	22	15.32	22	16.38	American	United States Navy	185.0	35.0		Cristobal	Balboa				
Uncas	21	13.53	22	6.30	22	15.36	22	16.40	British	Standard Transportation Co	375.0	51.2	24.6	Tampico	San Pedro	Fuel oil	5,925	4,861	3,261
Bourne	21	5.15	23	6.07	23	19.30	23	20.35	British	D. Pinkney	450.0	58.0	19.0	Amsterdam	Corral	General	1,550	7,539	5,450
Iowan	22	13.20	23	6.25	23	20.00	23	20.55	American	United American Lines	407.7	53.7	18.6	Boston	Tacoma	General	2,970	7,091	5,054
W. S. Miller	22	20.40	23	6.58	23	20.30	23	21.20	American	Standard Oil Co	435.0	56.0	27.0	Baton Rouge	Point Wells	Gasoline	8,800	7,705	5,385
Golden State	23	9.35	24	6.07	24	13.11	25	15.55	American	Pacific Mail S. S. Co. (S. B.)	517.0	72.2	26.9	Baltimore	San Francisco	General	925	15,296	10,237
K. L. Luckenbach	23	8.27	24	6.21	24	14.30	24	15.40	American	Luckenbach Line	446.0	56.0	24.4	Philadelphia	San Francisco	General	5,111	8,555	6,204
Satterlee [4]			24	9.12	24	15.15			American	United States Navy	311.0	31.0		Gatun Lake	Balboa				
Ontario [5]	22	13.05	24	7.20	24	16.40	25	10.15	American	United States Navy	169.0	34.0		Cristobal	San Francisco				
Huasco	19	17.35	24	7.37	24	15.47	24	17.20	Chilean	South American Steamship Line	378.0	44.0	23.0	Cristobal	Valparaiso	General	998	4,552	3,182
O-11 [6]			24	8.10	24	17.43			American	United States Navy				Cristobal	Balboa				
O-16 [6]			24	8.10	24	17.43			American	United States Navy				Cristobal	Balboa				
West Haven	23	16.04	24	8.57	24	17.52	24	19.00	American	Atlantic, Gulf & Pacific S. S. Co.	409.6	54.1	23.1	Texas City	Portland	General, sulphur.	6,000	6,665	5,020
Natal	24	9.15	24	10.03	24	20.14	24	22.25	Danish	Oriental Steamship Co	360.0	51.0	25.0	Jacksonville	Chanaral	Coal	6,230	4,670	3,303
Hawkeye State	23	11.28	24	10.04	24	18.30	25	12.07	American	Matson Navigation Co. (S. B.)	517.0	72.0	25.0	Baltimore	Los Angeles	General	1,539	15,234	10,471
Lela [7]			24		24	9.31			American	J. D. Barker				Cristobal	Gatun	Ballast		2	2
Orcus	24	23.45	25	7.00	25	14.24	25	15.20	American	Wessel Duval & Co. (S. B.)	380.0	53.0	19.1	New York	Salaverry	General	3,880	5,667	4,220
Brush	25	8.20	25	9.00	25	16.33	25	17.55	American	N. Atl. & Western S. S. Co. (S. B.)	390.0	54.2	27.8	Philadelphia	Portland	General	3,300	6,161	4,433
Mason [4]	23	23.45	25	9.25	25	15.32			American	United States Navy	310.0	31.0		Cristobal	Balboa				
Barima	15	20.02	25	9.45	25	17.16	25	19.50	British	Pacific Steam Navigation Co	220.5	37.1	12.4	Cristobal	Champerico	General	410	1,651	918
Peru	19	22.30	26	6.10	26	13.38	26	20.52	British	Pacific Steam Navigation Co	350.0	43.0	18.0	Cristobal	Valparaiso	General	598	4,095	2,655
South American	25	12.05	26	6.15	26	13.45	26	15.20	American	South American Steamship Co	251.0	43.0	19.1	New York	Callao	Coke and general	2,700		
Quillota	24	9.00	26	6.30	26	14.18	26	19.03	British	Pacific Steam Navigation Co	361.4	46.0	19.0	New York	Guayaquil	General	765	4,768	2,956

[1] Tug, towing barge *No. 58* and subchasers *Nos. 286* and *355*. [2] Subtender. [3] Mine sweeper, towing barge *No. 283*. [4] Destroyer. [5] Tug, towing U. S. S. Eagle *No. 32*. [6] Submarine. [7] Launch.

Steel Ranger	26	2.50	26	7.27	26	15.47	26	16.45	American	United States Steel Products Co.	424.0	56.0	26.6	New York	Los Angeles	General, steel	8,300	7,539	5,448
Freeport Sulphur No. 5	26	7.00	26	7.42	26	16.40	26	21.01	American	Freeport Sulphur Co.	355.0	52.0	20.6	Texas City	San Francisco	Sulphur	5,551		

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Mallard	13	16.26	20	6.25	20	17.25	21	19.50	American	United States Navy	187.0	38.0		Balboa	Cristobal				
Quilpue	19	18.30	20	6.48	20	14.45	22	4.17	British	Pacific Steam Navigation Co.	361.0	46.2	17.0	Guayaquil	New York	Coffee and cocoa	1,205	4,742	3,023
Nereus	11	13.30	20	7.37	20	15.11	23	10.14	American	United States Navy	500.0	62.0	25.0	Callao	Guantanamo	Coal	4,500	11,143	6,749
Proteus	11	13.30	20	7.55	20	16.45	23	10.16	American	United States Navy	500.0	62.0	26.6	Callao	Guantanamo	Coal	8,000	11,143	6,749
Nitokris	19	17.20	20	9.34	20	17.40	20	23.05	British	H. M. King	411.8	50.7	23.6	Melbourne	Antwerp	Wheat	5,400	6,652	4,704
Bridge	11	13.30	20	10.40	20	18.20	20	22.10	American	United States Navy	423.0	55.3	21.6	Callao	Hampton R'ds				
Australbrook	20	8.30	20	11.20	20	20.40	20	21.50	British	Commonwealth Government Line	375.5	52.2	19.0	Sydney	London	General	4,600		
El Condado	19	23.00	20	12.55	20	21.00	21	11.53	Spanish	Cia General de Navigacion	330.0	48.9	20.0	Mejillones	Bilbao	Nitrate	4,765	3,730	2,637
City of Alameda	17	15.35	20	15.59	20	22.22	20	23.40	American	Columbus Shipping Co. (S. B.)	435.0	56.0		Balboa	Port Lobos	Ballast		7,614	5,326
Black Hawk	14		21	6.53	21	15.10	21	15.10	American	United States Navy	404.6	53.9		Callao	Guantanamo				
Solace	11	13.00	21	6.54	21	14.05	23	10.10	American	United States Navy	377.0	44.0		Callao	Guantanamo				
Chewink	4	16.14	21	7.07	21	15.17	23	8.55	American	United States Navy	180.0	35.6		Balboa	Cristobal				
Carrabassett	1-20	18.33	21	7.09	21	14.20	23	9.20	American	United States Navy				Balboa	Guantanamo				
Iuka	4	16.02	21	7.10	21	14.17	23	8.35	American	United States Navy	149.3	30.0		Balboa	Cristobal				
Contocook	1-20	18.33	21	7.10	21	15.20	23	8.28	American	United States Navy				Balboa	Cristobal				
Yorba Linda	20	14.36	21	7.52	21	16.00	21	16.45	American	General Petroleum Co.	435.0	56.0	24.0	Los Angeles	Tampico	Lumber, general	1,000		
Oak Branch	20	17.00	21	8.20	21	17.32	22	12.50	British	Nautilus Steam and Shipping Co	385.0	49.8	23.0	Iquique	Antwerp	General	6,224	5,209	4,031
Columbia	14		21	10.55	21	17.52	23	10.03	American	United States Navy	411.6	58.3		Callao	Guantanamo				
Glittertind	21	8.45	21	11.25	21	21.00	21	23.34	Norwegian	Herr, Skiebcreder Kield Stub	330.8	47.2	23.6	Tocopilla	Bordeaux	Nitrate	5,150		
Maricopa	21	11.20	21	12.30	21	19.42	21	23.21	Norwegian	W. Wilhelmsen	425.5	57.0	19.6	Antofagasta	Tampico	Ballast		6,996	5,108
Point Adams	20	18.20	21	13.58	21	21.30	22	14.12	American	Pacific Mail Steamship Co.	289.0	44.1	19.7	San Francisco	Baltimore	(9)	2,492	2,899	1,971
West Eldara	20	22.00	21	14.22	21	20.07	21	23.00	American	Barber Line (S. B.)	409.6	54.2	23.6	Honolulu	Savannah	Sugar, nitrate	7,000	6,656	5,012
Kelbergen	21	12.45	21	14.52	21	23.15	22	2.40	Dutch	South Holland Shipping Co.	384.9	52.0	22.6	Portland	Immingham	Railroad ties	6,600	5,341	3,856
Ontario	20	16.49	22	6.10	22	13.05	24	7.20	American	United States Navy	175.0	34.0		Balboa	Cristobal				
Owl	18	19.25	22	6.45	22	11.35			American	United States Navy	180.0	35.0		Balboa	Gatun				
Eagle No. 4	21	17.56	22	6.48	22	13.00			American	United States Navy	200.0	25.0		Balboa	Cristobal				
India Maru	21	16.15	22	7.57	22	16.25	22	21.35	Japanese	Kabushaki Kaisha Kawasaki	385.0	51.0	25.0	Tocopilla	Falmouth	Nitrate	8,000	5,728	4,381
Shabonne	21	20.55	22	8.06	22	15.06	22	15.06	British	Standard Oil Co.	379.0	50.8	19.0	San Francisco	Tampico	Ballast		5,255	3,717
La Habra	21	22.00	22	9.54	22	17.00	22	21.35	Norwegian	W. Wilhelmsen	424.8	57.0	18.6	Tocopilla	Tampico	Ballast		7,053	5,085
Manavi	22	8.45	22	10.11	22	17.50			British	Pacific Steam Navigation Co.	216.0	35.1	10.0	Guayaquil	Cristobal	General	140	1,357	884
Penza	21	19.45	22	14.46	22	22.36			Russian	Russian Volunteer Fleet	299.7	41.5	18.9	Hongkong	Habana				
North Dakota[8]	14		23	5.10	23	14.55	23	14.55	American	United States Navy	510.0	85.3		Callao	Guantanamo				
Delaware[8]	14		23	5.23	23	15.50	23	15.50	American	United States Navy	510.0	85.0		Callao	Guantanamo				
Utah[8]	14		23	6.36	23	16.57	23	16.57	American	United States Navy	510.0	88.3		Callao	Guantanamo				
Arizona[8]	14		23	6.48	23	18.07	23	18.07	American	United States Navy	600.0	97.0		Callao	Guantanamo				
Pennsylvania[8]	14		23	7.41	23	19.44	23	19.44	American	United States Navy	600.0	97.0		Callao	Guantanamo				
Oklahoma[8]	14		23	7.50	23	18.45	23	18.45	American	United States Navy	575.0	95.3		Callao	Guantanamo				
Dahlgren[4]	14		23	9.26	23	23.10	23	23.41	American	United States Navy	310.0	31.0		Callao	Guantanamo				
Mason[4]	14		23	9.45	23	23.45	25	9.25	American	United States Navy	310.0	31.0		Callao	Guantanamo				
Satterlee[4]	14		23	9.51					American	United States Navy	310.0	31.0		Callao	Guantanamo				
Semmes[4]	14		23	9.58	23	23.03	24	12.54	American	United States Navy	310.0	31.0		Callao	Guantanamo				

[8] Battleship.

[9] Beans, onions, sugar, and general.

MOVEMENTS OF OCEAN VESSELS—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC—continued.

Ship	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Hatfield [4]	14	.....	23	10.04	23	21.46	24	12.53	American	United States Navy	310.0	31.0	.....	Callao	Guantanamo	.....	.....	.....	.....
Preston [4]	14	.....	23	10.11	23	23.05	24	12.48	American	United States Navy	289.0	26.0	.....	Callao	Guantanamo	.....	.....	.....	.....
Crowinshield [4]	14	.....	23	11.23	23	23.32	24	12.50	American	United States Navy	310.0	31.0	.....	Callao	Guantanamo	.....	.....	.....	.....
Preble [4]	14	.....	23	11.32	23	23.35	24	1.05	American	United States Navy	310.0	31.0	.....	Callao	Guantanamo	.....	.....	.....	.....
Nevada [8]	14	.....	23	11.33	23	21.15	23	21.15	American	United States Navy	575.0	95.0	.....	Callao	Guantanamo	.....	.....	.....	.....
Sicard [4]	14	.....	23	12.12	24	0.48	24	2.56	American	United States Navy	310.0	31.0	.....	Callao	Guantanamo	.....	.....	.....	.....
Herbert [4]	14	.....	23	12.19	24	0.52	24	12.52	American	United States Navy	310.0	31.0	.....	Callao	Guantanamo	.....	.....	.....	.....
Dickerson [4]	14	.....	23	12.32	24	1.12	24	2.57	American	United States Navy	310.0	31.0	.....	Callao	Guantanamo	.....	.....	.....	.....
Schenck [4]	14	.....	23	12.38	24	1.20	24	3.08	American	United States Navy	310.0	31.0	.....	Callao	Guantanamo	.....	.....	.....	.....
Bernadou [4]	14	.....	23	12.55	24	1.00	24	2.57	American	United States Navy	310.0	31.0	.....	Callao	Guantanamo	.....	.....	.....	.....
Blakeley [4]	14	.....	23	12.55	24	1.03	24	3.03	American	United States Navy	310.0	31.0	.....	Callao	Guantanamo	.....	.....	.....	.....
Graham [4]	14	.....	23	13.46	24	2.32	24	3.15	American	United States Navy	310.0	31.0	.....	Callao	Guantanamo	.....	.....	.....	.....
Barney [4]	14	.....	23	13.55	24	2.36	24	3.07	American	United States Navy	310.0	31.0	.....	Callao	Guantanamo	.....	.....	.....	.....
Leary [4]	14	.....	23	14.01	24	2.42	24	2.46	American	United States Navy	310.0	31.0	.....	Callao	Guantanamo	.....	.....	.....	.....
Goldsborough [4]	14	.....	23	14.04	24	2.50	24	3.08	American	United States Navy	310.0	31.0	.....	Callao	Guantanamo	.....	.....	.....	.....
Chile	23	6.00	23	14.20	24	3.44	.....	.....	British	Pacific Steam Navigation Co.	350.2	43.1	16.6	Valparaiso	Cristobal	General	412¾	4,065	2,668
Prometheus	11	1.10	24	6.35	24	16.22	25	6.18	American	United States Navy	450.0	60.0	22.6	Callao	Guantanamo	.....	.....	.....	.....
H. H. Asquith	23	21.30	24	6.48	24	17.32	24	17.32	British	Williams & Mordey	390.1	52.5	26.0	Taltal	Fayal [12]	Nitrate of soda	7,757	5,692	3,919
Lake Ellijay [10]	23	14.30	24	7.08	24	18.52	24	20.37	American	N. O. & S. A. S. S. Co.	253.0	43.0	24.3	Iquique	Charleston	Nitrate	3,616	2,920	1,973
Vireo	4	16.05	24	9.08	24	16.32	25	15.05	American	United States Navy	180.0	35.6	.....	Balboa	Guantanamo	.....	.....	.....	.....
Bobolink	4	16.11	24	9.08	24	16.35	25	15.05	American	United States Navy	180.0	35.6	.....	Balboa	Guantanamo	.....	.....	.....	.....
Quail	4	16.21	24	9.17	24	17.30	25	15.05	American	United States Navy	180.0	35.6	.....	Balboa	Guantanamo	.....	.....	.....	.....
Rail	4	16.17	24	9.17	24	17.33	25	15.05	American	United States Navy	180.0	35.6	.....	Balboa	Guantanamo	.....	.....	.....	.....
Balboa	24	13.24	24	14.54	24	22.52	.....	.....	American	Columbian Maritime Co.	190.0	29.1	15.0	Buenaventura	Cristobal	(13)	631.61	741	350
Songdal	24	3.10	24	15.05	24	23.55	24	23.55	Norwegian	S. O. Stray & Co.	330.0	47.3	21.0	Caleta Colosa	Ostend	Nitrate	4,525	3,768	2,532
Gloriana [11]	1–28	10.00	24	11.00	24	22.40	.....	.....	American	Carl K. McFadden	63.7	13.8	.....	David	Cristobal	.....	.....	34	30
Mary Luckenbach	24	16.00	25	6.31	25	15.19	25	16.02	American	Luckenbach Terminals	410.5	54.3	19.0	San Francisco	New York	General	700	.....	.....
Nokotay	24	21.15	25	7.04	25	16.12	25	18.17	American	U. S. and Australia Line (S. B.)	402.6	53.0	14.0	Brisbane	New York	General	2,000	6,580	4,927
Cecil County	25	8.30	26	6.53	26	13.55	26	14.14	American	Columbia Shipping Co. (S. B.)	431.0	59.2	20.6	Iquique	New Orleans	Fuel oil	13,000	8,097	5,400
Jamaica	25	1.30	25	8.17	25	17.08	.....	.....	British	Pacific Steam Navigation Co.	220.0	34.0	11.6	Champerico	Cristobal	General	171½	1,187	622
Cordelia	25	19.00	26	7.35	26	15.03	26	14.44	British	C. T. Bowring & Co.	420.3	54.6	19.0	Antofagasta	Port Lobos	Ballast	.....	6,690	4,963
Celtic Prince	25	23.20	26	8.49	26	17.49	26	19.05	British	Prince Line	449.0	54.3	24.0	Shanghai	Boston	General	7,200	.....	.....
Artigas	26	13.00	26	13.59	26	21.04	26	21.04	American	N. Atl. & Western S. S. Co. (S. B.)	390.0	54.2	19.6	Los Angeles	Philadelphia	General	1,454	6,161	4,427

[10] S. B. [11] Yacht. [12] For orders. [13] Coffee, hats, gold dust, ivory nuts, and bark.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

(Continued on page 423, column 2.)

Departure of the Fleets.

The Atlantic and Pacific fleets of the United States Navy, which arrived at Balboa on February 14, departed last week. The Atlantic fleet left on February 23, passing through the Canal on its way to Guantanamo, and the Pacific fleet cleared on February 25 for San Diego.

Destroyer "Woolsey" Sunk in Consequence of Collision.

The destroyer *Woolsey* of the Pacific fleet of the United States Navy, bound from Balboa to San Diego, was in collision with the merchant ship *Steel Inventor*, bound for the Canal, at a point about 13 miles off Coiba Island, Panama, early in the morning of February 26, and sank while the effort was being made to beach her. Sixteen men of the crew of 120 were drowned. Fifteen of the recovered bodies were sent on to San Diego on the destroyer *Aaron Ward*; later the body of another man was recovered, and was brought to Balboa on the destroyer *Buchanan* and buried in Corozal Cemetery.

After the sinking, the *Steel Inventor* proceeded to Balboa, accompanied by the *Buchanan*. The 2 vessels reached Balboa in the late afternoon of February 27. The *Steel Inventor* was damaged on the port bow, and is being repaired at Balboa shops. An inquiry is being made into the cause of the collision.

Quick Work in Dry-docking and Repairing Destroyers.

During the stay of the combined fleet at Balboa, call was made on short notice for the dry-docking and repair of the destroyer *Wickes*, with the request that she be placed in the dock on Tuesday, February 22, and finished by evening of Wednesday, February 23, without the use of overtime. While the *Wickes* was in dry dock, request was made at 1.30 a. m., February 23, that work on her be expedited and that the destroyer *Mugford* be dry-docked as soon as possible thereafter. With rush work the *Wickes* was finished and withdrawn at 8.30 in the morning of February 23, and the *Mugford* immediately placed in the dock. The dock was pumped out and the necessary work done on the *Mugford*, under rush conditions, so that she was able to leave the dry dock at 4 o'clock that afternoon and sail with her squadron on scheduled time.

Disapproval of Libeling Vessels for Assistance Rendered in Canal Waters.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 21, 1921.

To all concerned—Quite recently the Governor has had a request from an employee for permission to libel a vessel which caught fire while lying at a pier in the harbor of Balboa. This employee was on duty at the time he proceeded to the assistance of the vessel, although not on duty with reference to that vessel.

It is the belief of the Governor that all employees of The Panama Canal should be considered available for such emergency work as is involved in rendering assistance to a vessel on fire within the confines of the port of Balboa without laying the vessel liable to libel for salvage. The Governor considers that all shipping within the Canal prism, or, to be exact, within the limits marked by the sea buoys at Balboa and the breakwater at Cristobal, have a right to expect any assistance from the equipment and personnel of The Panama Canal which is necessary for their proper care, preservation and handling in Canal Zone waters.

He believes that the equipment of the Canal Zone is maintained for the above purpose; and that the reputation of the Canal for fair dealing requires that the above viewpoint be insisted upon and maintained. In view of the above, the Governor will not approve in future, any proposal to libel vessels for assistance in emergencies

within the Canal waters; and if any such libel is placed by a Canal employee, it will be considered that such employee has taken action which is inimical to the best interests of the Canal, even though such action technically be within the law.

By direction of the Acting Governor.

C. A. McIlvaine,
Executive Secretary.

Ship Bunkered With 1,002 Tons of Coal in 1 Hour and 10 Minutes.

In addition to the records for rapid bunkering of ships with coal at the Cristobal coaling station, published in The Panama Canal Record of December 15, 1920, the Superintendent of Coaling Plants has reported a new high record for the delivery of approximately 1,000 tons. This was the bunkering of the steamship *Pakeha* on December 24, 1920, with 1,002 tons in 1 hour and 10 minutes. The tons are gross tons of 2,240 pounds.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended February 26:

U. S. S. *Dahlgren*, small miscellaneous S. E. repairs; U. S. S. *Wm. Jones*, small miscellaneous S. E. repairs; yacht *Gloriana*, manufacture and installation of skeg fitting and miscellaneous repairs; tender *Perico*, docking, staging, cleaning, painting, and miscellaneous repairs; U. S. S. *Mallard*, repairs to main engine, feed heater, and generators; U. S. S. *Wyoming*, repairs to main turbines and refrigerating system; U. S. S. *Pennsylvania*, cut, roll, and flange 24 plates; U. S. S. *Mason*, renew starboard propeller guard; tug *Bohio*, general repairs and rebuilding; steamship *Sussex*, heavy accident repairs and docking, cleaning, and painting; U. S. S. *New Mexico*, repairs to main engines and ammunition hoists; barges *Nos. 132*, *134*, and *135*, general repairs; steamship *Caddo*, heavy repairs; launch *Pilot*, general repairs; steamship *Caribbean*, general repairs; U. S. S. *Cuyana*, minor S. E. repairs; U. S. S. *Orion*, temporary repairs to shell plating; U. S. submarines *O–11* and *O–16*, periodical overhaul; U. S. S. *Mugford*, docking, staging, cleaning, painting, and propeller repairs; U. S. S. *Semmes*, manufacture worm gear; U. S. S. *Wickes*, dock, clean, and paint bottom, and hull repairs; bark *C. D. Bryant*, services of diver; steamship *Golden State*, galley repairs; barge *No. 138*, general repairs.

The following vessels were at the Cristobal shops for repairs during the week ended February 28:

Steamships *Panama*, *Cristobal*, and *Ancon*, miscellaneous repairs and painting to engine, deck, and steward departments; *North American*, repairs to hull, cleaning and painting hull; U. S. S. Eagle *No. 31*, install ballast, clean and paint bottom; launches *Sarita*, miscellaneous repairs, paint hull above water line and superstructure; *Capron*, repair hull, sheathing, engine, and pump, etc.; *Mc Kee*, repair hull and engine; *Putnam*, repairs to hull, wheel, and shaft as directed; barge *No. 19*, scale and paint; steamships *Jamaica*, repair beams under boiler, repair auxiliary steam pipe, etc.; *Balboa*, renew screws on portholes, etc.; *Morristown*, realign engine and compressor, ice machine, etc.; *Chile*, weld staynut, port boiler, repair circulating pump, shaft, etc.; *Macoris*, repair blower engine in fireroom, overhaul throttle valve of feed pump, etc.; *Oropesa*, *Metapan*, *Heredia*, U. S. A. T. *Santa Leonora*, steamship *Utique*, U. S. S. Eagle *No. 4*, steamships *Hawkeye State*, *Golden State*, *Cartago*, *Manavi*, *Penga*, and *Bourne*, minor repairs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending February 26, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	*Tons.*
Point Adams	Pacific Mail Steamship Co.	February 20	February 21	303	.....
Manavi	Pacific Steam Navigation Co.	February 21	February 22	1	.....
Chile	Pacific Steam Navigation Co.	February 23	February 23	7	.....
Golden State	Pacific Mail Steamship Co.	February 24	February 24	.....	2
Balboa	Colombian Maritime Co.	February 24	February 24	1	.....
Jamaica	Pacific Steam Navigation Co.	February 25	February 25	2	.....
Peru	Pacific Steam Navigation Co.	February 26	February 26	1	117
Cecil County	United States Shipping Board	February 25	February 26	1,857	.....
Coolcha	Pacific Motorship Co.	February 26	.....	328	97

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending February 26, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Jan Van Nassau	Royal Dutch W. I. Mail		February 20		1,090
Gen. G. W. Goethals	Panama Railroad Steamship Line	February 20		3,100	
Alianca	Panama Railroad Steamship Line		February 21		309
Quilpue	Pacific Steam Navigation Co		February 21		1,158
Point Adams	Pacific Mail Steamship Co	February 21	February 22	700	38
Bourne	Royal Dutch W. I. Mail	February 21	February 23	175	(1)
Cartago	United Fruit Co	February 22	February 24	1,012	71
Manavi	Pacific Steam Navigation Co	February 22		140	
Atenas	United Fruit Co	February 23	February 23	½	20
Huasco	Chilean Line		February 24		1,394
Barima	Pacific Steam Navigation Co		February 25		410
Peru	Pacific Steam Navigation Co		February 26		598
Macoris	French Line	February 23	February 26	56	77
Chile	Pacific Steam Navigation Co	February 24		408	
Quillota	Pacific Steam Navigation Co	February 24	February 26	110	110
Arana	Pacific Steam Navigation Co		February 26		1,177
Balboa	Colombian Maritime Co	February 24		631	
Ulua	United Fruit Co	February 25	February 26	488	133
Jamaica	Pacific Steam Navigation Co	February 25		170	
Panama	Panama Railroad Steamship Line	February 26		2,090	
San Bruno	United Fruit Co	February 26	February 26	70	[2] 100

[1] No cargo laded. [2] Pounds.

Notice to Mariners.—Change of Light at Cartagena, Colombia.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 24, 1921.

CIRCULAR No. 643-79:

The Colombian Postal Agent at Colon has received the following cablegram:

"CARTAGENA, COLOMBIA, February 16, 1921.

Advise Port Captains lighthouse Boca Chica changed stationary light for intermittent light, 12 flashes per minute.

(Signed) CUSTOMS."

This light is described in H. O. 130, Central America and Mexico Pilot, 1920, as "fixed white, elevated 60 feet, visible 12 miles, on wooden tower on the east corner of Fort San Fernando, northern side of entrance." Its position is approximately 10° 19′ 24″ N., and 75° 34′ 38″ W., according to H. O. Chart 978.

JAY J. MORROW,
Acting Governor.

Service at Balboa Restaurant During Visit of Fleets.

During the week from February 16 to 22, inclusive, while the fleets were at Balboa, the Balboa restaurant of The Panama Canal served a total of 19,270 meals, an average of 2,753 per day. The number of meals served at the restaurant ordinarily is about 1,000 per day. The figures given are for the caféteria and the *a la carte* tables combined. By employing extra help and two cashiers it was possible almost to triple the capacity of the restaurant, without increasing the average time of waiting in line to more than 6 or 7 minutes. Seats at tables for the patrons were available at all times.

Expedition Collecting Specimens for Museum.

An expedition from the Everhart Museum in Scranton, Pa., in charge of Dr. R. N. Davis, director of the museum, and including also Dr. J. G. Sanders, chief of the Bureau of Plant Industry of the State of Pennsylvania, Mr. M. J. Kelly, taxidermist, and Mr. Ford Petlick, representing the Boy Scouts, has been on the Isthmus several weeks, and will be here until March 20, collecting specimens of fauna and flora to be placed in the museum. The expedition is not intended

to make anything approximating a complete survey, or to do much original research, but primarily to gather representative specimens. It has worked principally in the Chagres Valley, above Gamboa, and along the Bayano River. Several hundred specimens of animals, reptiles, birds, and insects, and a variety of plants, have been secured so far. Doctor Davis has expressed admiration at the great variety of life to be found in the country.

An item of local interest in the findings of the expedition is that all of the specimens of *crocodilia* encountered on the Isthmus have been crocodiles and none of them alligators. The local practice is to call them alligators. The primary difference between the species lies in the shape of the snout and lower jaw, those of the crocodile being long and thin, narrowing at the outer end; while the alligator has them relatively short and blunt.

Mule Killed, Apparently by Crocodile, in Chagres River.

An American mule owned by the Supply Department and used by the contractor on Limon plantation was killed recently while trying to ford the Chagres River near the plantation. When about halfway across the river he began to kick and scream and soon went down. His body was found later, upstream, with one foreleg and shoulder chewed away. It is assumed that he was killed by a crocodile.

Reduction in Cases of Malaria.

A study of the reports of cases of malaria during the calendar years 1919 and 1920 shows a gratifying reduction in the cases. The following table shows the cases reported among employees of The Panama Canal and the Panama Railroad Company, and among nonemployees, in the areas of sanitation, the cattle camps and plantations, and miscellaneous unsanitated areas in the Canal Zone; and also from the cities of Colon and Panama, and miscellaneous unsanitated areas outside of the Canal Zone:

COMPARATIVE STATEMENT OF TOTAL NUMBER OF MALARIA CASES REPORTED DURING THE CALENDAR YEARS OF 1919 AND 1920.

	Employees.		Non-employees.		Total.	
	1919.	1920.	1919.	1920.	1919.	1920.
Canal Zone, sanitated areas	236	138	637	438	873	576
Canal Zone, cattle camps and plantations	301	111	28	6	329	117
Canal Zone, miscellaneous unsanitated areas	21	18	47	17	68	35
Colon	70	20	69	21	139	41
Panama	62	30	119	70	181	100
Miscellaneous unsanitated areas outside Zone	62	84	462	268	524	352
Total	752	401	1,362	820	2,114	1,221

Reductions are shown in all cases with the exception of the "Miscellaneous unsanitated areas outside Zone" where there was an increase from 62 to 84 cases. The Health Department states that this adds weight to its frequent warnings against unnecessary exposure, especially at night, in the near-by areas outside of the Canal Zone, which have not been subjected to sanitation. The decrease of danger of infection in the areas of sanitation appears to be reflected in an unwarranted belief in security in areas which have not been sanitated.

In general, the decrease in infection is attributed to an extension of the areas of sanitation. In the Colon-Cristobal district, for example,

the previous limit of sanitation was at Mount Hope, but during the past year, this was extended over a mile beyond Mount Hope. In the Corozal-Ancon-Panama area, the previous limit was the old Corozal-Panama Road, and in the past year sanitary work was carried to the eastward of this road approximately a quarter of a mile, by treating a number of small streams and swamps which resulted from the clogging of these streams by vegetation. The effort is being made steadily to substitute permanent tile drainage for such temporary measures as cleaning and oiling of ditches, where frequently antimosquito work is effective for no longer than 10 days unless repeated.

During the first visit of the combined Atlantic and Pacific fleets, in January, 1921, warnings were distributed against unnecessary exposure. The ships' surgeons were provided with forms for reporting cases of malaria contracted during the visit of the fleets. Only one case was reported and it is not certain that it was contracted on the Isthmus.

Bubonic plague is considered the greatest menace to the health of the Isthmus, if it should be introduced in spite of the antirat work and quarantine precautions carried on by the Health Department. There are no cases of plague on the Isthmus, and it has never started since the American occupation, save for an isolated case in 1905. Malaria, however, is endemic and is the most persistent of the diseases with which the Health Department has to contend. The reduction in the last year is considered as very promising and to speak well for the cooperation of the employees with the Health Department.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z. (telephone 286):

Physician, $250 to $360 a month (male and female); form 1312; announcement No. 641; age, 22 but not 31 years; vacancies exist in The Panama Canal Service; March 12, 1921.

Apprentice draftsman, $900 to $1,050 a year (male and female); form 1312; announcement No. 128; age, 16 but not 55 years; vacancies exist in the Langley Memorial Aeronautical Laboratory, Langley Field, Hampton, Va.; March 29, 1921.[1]

Assistant dairy husbandman, $1,680 to $2,220 a year (male and female); form 1312; age, below 45 years; vacancies exist in the Dairy Division, Bureau of Animal Industry, Department of Agriculture; April 13, 1921.[1]

Associate agricultural economist, $3,600 a year (male and female); form 2118; announcement No. 122; age, 25 but not 55 years; vacancies exist in the Office of Farm Management, Department of Agriculture; March 15, 1921.[1]

Associate in clinical psychiatry and psychotherapy, $2,500 a year (male and female); form 2118; age, within reasonable age limits; vacancies exist in St. Elizabeth's Hospital, Washington, D. C.; March 29, 1921.

Auditor, Income Tax Unit, $1,800 to $3,000 a year (male and female); form 1312; announcement No. 74-amended; age, 23 but not 50 years; vacancies exist in the Income Tax Unit, Bureau of Internal Revenue, Treasury Department; March 23, 1921.

Chiefs of Divisions, Bureau of Foreign and Domestic Commerce, announcement No. 77-amendment; educational and experience requirements amended.

Dairy husbandman, $2,500 to $3,500 a year (male and female); form 2118; age, 21 but not 50 years; vacancies exist in the Dairy Division, Bureau of Animal Industry, Department of Agriculture,; March 29, 1921.[1]

Expert aid (optical); $10 per diem; No. 61-amendment; closing date postponed from February 15 to March 1, 1921.

Forest assistant, $1,200 to $1,800 a year (male and female); form 1312; announcement No. 121; age, 20 but not 50 years; vacancies exist in the Forest Service, Department of Agriculture and Indian Service, Department of the Interior; March 23–24, 1921.

Hydrographer, $1,500 to $1,800 a year (male and female); form 1312; announcement No. 119; age, 22 but not 55 years; vacancies exist in the Reclamation Service, Provo, Ill.; March 22, 1921.[1]

Instrument maker, $1,400 a year, Coast and Geodetic Survey; $6.16 to $7.20 per diem, Department of Steam Engineering, Navy Yard, Washington, D. C.; $6.88 per diem, Naval Observatory; $900 to $1,800 a year, Bureau of Standards, Department of Commerce; $1,200 a year, Office of the Secretary of Agriculture (male and female); form 1312; age, 20 but not 50 years; vacancies exist in the above-mentioned places; June 1, 1921.[1]

Mineral examiner, $1,500 to $1,620 a year (male and female); form 1312; announcement No. 125; age, 21 but not 50 years; vacancies exist in the General Land Office Service; March 23, 1921.

Reconstruction assistant, psychotherapy and occupational therapy; $600 to $960 a year (male and female); form 304; age, 21 but not 55 years; vacancies exist in the Public Health Service; June 1, 1921.[1]

Senior assistant physician, $2,500 to $3,500 a year; assistant physician, $2,000 to $2,500 a year; junior assistant physician, $1,500 to $1,800 a year (male and female); form 2118; announcement No. 120; age, below 55 years; vacancies exist in St. Elizabeth's Hospital, Washington, D. C.; March 22, 1921.[1]

Senior mechanical engineer, grade I, $3,000 to $5,000 a year (male and female); form 1312; announcement No. 126; age, below 55 years; vacancies exist in the Bureau of Locomotive Inspection, Interstate Commerce Commission, Washington, D. C.; March 29, 1921.[1]

Telegraph operator, $900 to $1,600 a year (male and female); forms 304 and 1140; age, within reasonable age limits; vacancies exist in the Bureau of Markets; Department of Agriculture and other places; March 23, April 25, and May 25, 1921.

[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Official Circulars.

Changes to Departmental Tariff "A."

THE PANAMA CANAL,
PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 4, 1921.

To all concerned—The following changes and additions are made to Departmental Tariff "A"—Schedule of Rates for Supplies and Services Furnished to Departments and Divisions of The Panama Canal, Panama Railroad, other Departments of the United States Government, employees, and those entitled to employees' rates, except where otherwise specified:

Class VI—HOTELS, RESTAURANTS, AND MESSES.

Item 2.

Hotel Tivoli.

(Effective January 26, 1921.)

Tivoli Annex, House No. 438: Employees.....per day.	1 person $1.50	2 persons $2.50

Class IX—MISCELLANEOUS.

Item 9.

Telephones.

(Effective January 26, 1921.)

4. No charge will be made against the subscriber for the installation of a telephone for private use, but applications will not be approved if the cost of installation is considered by the Electrical Engineer to be excessive. No charge will be made for removal or change of location of private telephones, unless changes of location are requested within 6 months of the date of original installation, or within 6 months of any change of location made without charge, in which case the cost of the change will be charged against the subscriber.

CHESTER HARDING,
Governor, The Panama Canal.
President, Panama Railroad Company.

(NOTE—The above changes and additions will be included in Supplement No. 3 to Departmental Tariff "A," when this supplement is issued.)

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., February 16, 1921.

CIRCULAR No. 280:

Effective February 14, 1921, Mr. W. F. Foster is designated an accountable official of The Panama Canal, *vice* Mr. S. W. Heald, and as such will account for all nonexpendable property in use by the Superintendent, Panama Railroad, and Panama Canal transportation.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
JAY J. MORROW,
Acting Governor.

Holding Quarters While at Temporary Station.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 18, 1921.

CIRCULAR No. 627-29:

1. A bachelor transferred away from his regular home station for a period in excess of 30 days, will be required to give up the quarters regularly assigned to him at his home station. A married man will be required to file application for quarters at his new station, if his temporary transfer exceeds 60 days.

2. These rules shall apply in all cases, except where an employee is sent to another station to provide relief for a permanent employee on vacation leave, in which case the maximum temporary period for holding quarters at his home station will be 120 days.

3. Circular No. 627-24, dated June 3, 1919, is amended accordingly.

JAY J. MORROW,
Acting Governor.

Acting Chief Quartermaster.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 23, 1921.

To all concerned—Effective February 24, 1921, and during the absence on leave of Mr. R. K. Morris, Mr. Roy R. Watson will act as Chief Quartermaster.

JAY J. MORROW,
Acting Governor.

Collections for Lost Property.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., February 19, 1921.

CIRCULAR No. 279:

To all concerned—Beginning with February, 1921, accounts, Circular No. 264, which provided that credits covering collections for lost property be passed to divisions through their stores accounts, is hereby canceled.

On and after February 1, accomplished pay roll deductions for lost property will be reported by the Claims Bureau to the General Accounts Section. The General Accounts Section will make up a detailed statement covering the transfer from the Paymaster to the Collector of all collections for lost property.

The Chief Examiner's Section in making up the journal entry of receipts and transfers of money by the Collector, will take into account such transfers, and all lost property collections will be credited to the respective divisions' unclassified expense account instead of Account 13-1, as was provided in Circular No. 264.

The Chief Examiner's Section will also furnish the Cost Accountant copies covering the detail of credits to the unclassified expense accounts as carried out prior to the change made by the canceled circular above mentioned.

The divisions making up certificates for deductions covering lost property on form 5221-2

will check the accomplished copies received from the Bureau of Pay Rolls to make sure that all such requests have reached the pay roll section and that the necessary deductions have been made. If a division fails to get credit for all deductions requested, the matter should be taken up with the Bureau of Pay Rolls for investigation.

After the accomplished copies have been returned by the Bureau of Pay Rolls, certifying that deduction has been made, the divisions or bureaus interested will forward the original and one copy to the Auditor, when same covers non-expendable property, and the original only when it covers expendable material.

H. A. A. SMITH,
Auditor, The Panama Canal.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., February 28, 1921.

Insufficiently addressed mail matter for the following has been received in the office of the Director of Posts and may be obtained upon request of the addressees. Request for forwarding may be made by telephone, calling No. 182, Balboa:

Alkins, Mrs. Betsy
Aponte, Miguel
Arnaud, Mrs. P.
Bertz, Miss Helen
Bramin, Mrs. E. F.
Bromley, Helen Louise
Burleson, Dr. John F.
Callahan, Wm. J.
Davis, J. M.
Dice, C. E.
Donohue, Mary
Duran, Tessie
Estwick, Ernest
Faby, Mrs. M. E.
Franzen, Frederick
Fuller, Mrs. F. D.
Grady, Edward
Haas, Charles
Holmes, Mrs. Frederick
Jordan, Augustus
Kodgeman, Ed.
Kelly, Wm. O.
Lacroisade, E.
Larick, Seymour
MacEachron, Mrs. Arthur.
Mulcahy, Mrs. M. J.
Quist, Mrs. Clara
Richardson, Mrs. Lee J.
Robert, Miss Agnes
Schneegross, Victoria
Schultz, Charles
Shea, Mrs. Thom
Shearer, Glenn H.
Smith, Frank
Smith, S. F.
Talbot, Frank S.
Vernon, Mary
Walton, R. H.
Whale, Edmund E.
Wilkinson, J. M.
Wimberly, G. F.
Winkler, Robert

Sale of Gasoline Launch.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, up to 10.30 a. m., March 7, and then opened, for the purchase of the gasoline launch *Pioneer*. Detailed information and form of proposal may be had upon application to the office of the Chief Quartermaster. The Panama Canal reserves the right to reject any or all bids.

Sale of Laying Mash.

The Summit Poultry Farm has on hand about 6,000 pounds of laying mash, in excess of the amount required, which is offered for sale at $7.42 per cwt. f. o. b. Summit poultry farm. Orders should be placed on the Superintendent of the Cattle Industry Division, Cristobal.

Eggs for Setting.

For a limited period only purchases of eggs for setting may be made at the Summit poultry farm at the following prices:

White Leghorn or Rhode Island Red, per setting of 15 eggs, $3; two settings, or 30 eggs, $5.50.

All sales f. o. b. Summit.

Additions to Commissary Stock.

Dry Goods Section.

Hair remover, powder, "Denny's" depilatory," pkg	$0.58
Towels, bleached, Turkish, cotton, 21" x 40"	.36

Hardware Section.

Cases, suit, leather, cordovan color, 24", ea	13.75
Irons, electric, flat, 3-lb., with cord and caps, ea	4.90
Irons, electric, flat, 8-lb., with cord and caps, ea	7.45
Trunks, steamer, canvas covered, 36", ea.	8.10
Trunks, steamer, fiber, 38", ea. $13.70 and	$19.45

MOVEMENTS OF VESSELS—Continued from page 416.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Feb. 20	St. Mihiel [14]	United States Army	New York.
Feb. 20	Atenas	United Fruit Co.	New Orleans and way-ports.
Feb. 20	Gen. G. W. Goethals.	Panama Railroad Steamship Line.	New York via Haiti.
Feb. 22	Cartago	United Fruit Co.	New Orleans via way-ports.
Feb. 23	Atenas	United Fruit Co.	Bocas del Toro.
Feb. 23	Macoris	French Line	St. Nazaire and wayports.
Feb. 23	Gansfjord	K. Olsen	New Orleans.
Feb. 22	Ulua	United Fruit Co.	New York via wayports.
Feb. 25	San Bruno	United Fruit Co.	Boston.
Feb. 26	Santa Leonora [14]	United States Army	New York.
Feb. 26	Panama	Panama Railroad Steamship Line.	New York via Haiti.
Feb. 26			

[14] Transport.

PORT OF BALBOA.

Feb. 20	Seiyo Maru	Toyo Kisen Kaisha	Valparaiso.
Feb. 26	Coolcha	Pacific Motorship Co.	San Francisco.

PORT OF CRISTOBAL.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Feb. 20	Jan Van Nassau	Royal Netherlands W. I. Mail	Puerto Colombia.
Feb. 20	Atenas	United Fruit Co.	Bocas del Toro.
Feb. 21	Alliauca	Panama Railroad Steamship Line.	New York via Haiti.
Feb. 22	Achilles [15]	Panama Railroad Steamship Line.	Norfolk.
Feb. 23	Atenas	United Fruit Co.	New Orleans.
Feb. 23	St. Mihiel [14]	United States Army	New York.
Feb. 24	Cartago	United Fruit Co.	New Orleans via Bocas del Toro and Habana.
Feb. 24	Gansfjord	K. Olsen	Santa Marta.
Feb. 26	Macoris	French Line	Puerto Colombia.
Feb. 26	Ulua	United Fruit Co.	New York via Port Limon and Habana.
Feb. 26	San Bruno	United Fruit Co.	Boston.
Feb. 26	Arana	McAndrews	Puerto Barrios.

[15] And barge *Darien*.

PORT OF BALBOA.

*Other than ships passing through the Canal.

Feb. 20	Tokuyo Maru	Toyo Kisen Kaisha	Valparaiso.
Feb. 21	Seiyo Maru	Toyo Kisen Kaisha	Hongkong.
Feb. 25	Pacific Fleet	United States Navy	San Francisco.

Locations of Patients, and Visiting Hours, at Ancon Hospital.

The following table shows the distribution of patients in the new Ancon Hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Present number of beds.	Visiting hours.
Section "A"—White American, male:		Tuesdays, Thursdays, and Saturdays, 2 to 4.30 p. m. and 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11 a. m. and 2.30 to 4.30 p. m.
Ward No. 1, Medical, Eye and Ear	44	
Ward No. 2, Medical, Eye and Ear	41	
Ward No. 3, Surgical	44	
Ward No. 4, Surgical	41	
Cells (2)	2	
	172	
Section "B":		
White American, female	23	Daily except Sunday, 2 to 4.30 p. m.; 6.30 to 8 p. m. Sundays and holidays, 10 to 11 a. m.; 2 to 4.30 p. m. 6.30 to 8 p. m.
White foreign, female	15	
Nursery	16	No visitors permitted.
Private rooms (49)	46	Daily, 9.30 to 11 a. m.; 2 to 4.30 p. m.; 6.30 to 8 p. m.
Cells (2)	2	
	102	
Section "C":		
Ward No. 9, White foreign, male	39	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 10, Colored, eye and ear, convalescent medical	39	
Ward No. 11, Colored Acute surgical	39	
Ward No. 12, Colored Acute medical	39	
Ward No. 13, Colored Convalescent surgical	39	
Ward No. 14, Colored Convalescent surgical	39	
Cells (6)	6	
Rooms (7)	7	
	247	
Section "D":		
Ward No. 15	41	
Ward No. 16	39	
Ward No. 17, Colored children	32	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 18, White children	30	Daily, 9.30 to 10 a. m.; 2 to 4 p. m.
Ward No. 19, Colored female medical	41	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 20, Colored female surgical	34	
Rooms (6)	6	
Cells (6)	6	
	229	
Isolation:		No visitors permitted.
Floor No. 1	14	
Floor No. 2	29	
Floor No. 3	28	
Floor No. 4	28	
	99	
Total number of beds	849	

Emergency passes are issued only by and in the discretion of the section nurse.

COMMISSARY NOTE.

Books.

Books received:

"Spanish-English Dictionaries; "The Devil's Paw," by E. Phillips Oppenheim; "Drums of Jeopardy," by Harold McGrath; "Chips of Jade," by Arthur Guiterman; "Poor Man's Rock," by E. W. Sinclair; "The Mind of a Woman," by A. T. Schofield; "Letters to a Niece and Prayer to the Virgin of Chartres," by Henry Adams; "The Joyful Heart," by Robert Haven Schauffler; "The Leopard Woman" by Stewart Edward White; "The Eyes of the World," by Harold Bell Wright; "The Hidden Hand," by Mrs. Southworth; "The Conquest of Canaan," by Booth Tarkington; "Extricating Obadiah," by Joseph C. Lincoln; "Cruel as the Grave," by Mrs. Southworth; "The Wire Devils," by Frank L. Packard; "Lin McLean," by Owen Wister; "The Two-Gun Man," by Charles Alden Seltzer; "The Fighting Chance," by Robert W. Chambers; "Lucille," by Owen Meredith; "Bob, Son of Battle," by Alfred Ollivant; "The Conspirators," by Robert W. Chambers; "Bambi," by Marjorie Benton Cooke; "The Barrier," by Rex Beach; "Window in Thrums," by J. M. Barrie; "The Sin That Was His," by Frank L. Packard; "Athalie," by Robert W. Chambers; "The Cinema Murder," by E. Phillips Oppenheim; "House of Whispering Pines," by Anna Katharine Green; "The Crimson Gardenia," by Rex Beach; "Within the Law," by Bayard Veiller; "The Iron Woman," by Margaret Deland; "Arizona," by Augustus Thomas; "Girl of the Limberlost," by Gene Stratton Porter; "The Short Stop," by Zane Grey; "Where There's a Will," by Mary Roberts Rinehart; "Empty Pockets," by Rupert Hughes; "The Call of the North," by Steward Edward White; "The Girl Phillipa," by Robert W. Chambers; "The Sea Wolf," by Jack London; "Indian Fairy Tales," by Joseph Jacobs; "Japonette," by Robert W. Chambers; "The Iron Trail," by Rex Beach.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Volume XIV. Balboa Heights, C. Z., March 9, 1921. No. 30.

Increasing Oil Storage Facilities at Terminals.

Three more oil storage tanks, each of approximately 55,000 barrels capacity, are being erected in the oil storage farm at Cristobal, at the Atlantic terminus of the Canal, where 12 tanks are now in service for supplying ships with fuel and Diesel oil. The new tanks are for the Arrow Oil Company, the Pacific Mail Steamship Company, and the United Fruit Company. With their addition, the storage capacity at the Cristobal plant will be over 805,000 barrels, and the total at the 2 terminal plants over 1,375,000 barrels.

With the new tanks, the facilities of The Panama Canal and the several companies will be as follows:

Owner.	Cristobal.		Balboa.		Total both terminals.	
	No. of tanks.	Aggregate storage.	No. of tanks.	Aggregate storage.	No. of tanks.	Aggregate storage.
The Panama Canal	[1] 4	[1] 196,587	[2] 5	[2] 199,781	9	396,368
Panama Canal Storage Corporation	2	110,872	2	110,584	4	221,456
West India Oil Co	2	110,000	2	84,946	4	194,946
Union Oil Co. of California	.....	.....	4	149,078	4	149,078
Huasteca Petroleum Co	2	111,721	.....	.....	2	111,721
The Texas Co	2	111,515	.....	.....	2	111,515
Arrow Oil Co	1	55,000	.....	.....	1	55,000
Pacific Mail Steamship Co	1	55,000	.....	.....	1	55,000
United Fruit Co	1	55,000	.....	.....	1	55,000
Panama Agencies Co	.....	.....	1	25,064	1	25,064
Total	15	805,695	14	569,453	29	1,375,148

[1] Includes 1 tank of 55,954 barrels used for storage of Diesel oil.
[2] Includes 1 tank of 4,038 barrels used for storage of Diesel oil.

Gasoline storage, in addition to the above, is provided by The Panama Canal with a tank of 5,382 barrels (226,028 gallons) at Cristobal, and a tank of 5,404 barrels (226,976 gallons) at Balboa.

The Huasteca Petroleum Company has leased a site for another 55,000-barrel tank at Cristobal, on which it proposes to begin erection shortly. This tank is not included in the figures above.

Reduction in Price of Fuel Oil.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., March 3, 1921.

To all concerned—The following change is made to Tariff No. 4, Schedule of Rates for Supplies and Services furnished to Shipping and Allied Interests at the Panama Canal:

ITEM 22—FUEL AND DIESEL OILS.

Effective March 10, 1921.

1. Fuel oil per barrel of 42 gallons, delivered to vessels at either Cristobal or Balboa $2.75

JAY J. MORROW,
Acting Governor, The Panama Canal.
Second Vice President, Panama Railroad Company.

(NOTE—The above change will be included in Supplement No. 4 to Tariff No. 4, when this supplement is issued.)

CANAL WORK IN JANUARY.

The following is the report of the Acting Governor to the Secretary of War, of Canal work in the month of January, 1921:

BALBOA HEIGHTS, C. Z., February 25, 1921.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of The Panama Canal for the month of January, 1921:

CANAL TRAFFIC.

The number of ocean-going ships passing through the Canal during the month was 354, of which 279 were commercial vessels, and 75 United States Government vessels. A detailed classification of both government and commercial vessels will be found under the tables included in this report.

A comparison of this month's commercial traffic with that of the preceding month, of the corresponding month of 1920, and of the average month's traffic for the past 12 months, shows the following:

Panama Canal net tonnage:	
January, 1921	1,094,323
December, 1920	1,027,918
January, 1920	765,533
Average, past 12 months	892,254
Registered gross tonnage:	
January, 1921	1,383,778
December, 1920	1,298,864
January, 1920	992,024
Average, past 12 months	1,141,053
Registered net tonnage:	
January, 1921	883,362
December, 1920	823,758
January, 1920	632,154
Average, past 12 months	725,801
Tolls earned:	
January, 1921	$1,095,857.46
December, 1920	1,007,849.32
January, 1920	766,771.49
Average, past 12 months	885,372.08
Tons of cargo carried:	
January, 1921	1,177,053
December, 1920	1,076,539
January, 1920	894,628
Average, past 12 months	959,879

The total number of vessels and craft of all kinds through the Canal was 358, as compared with 292 for last month. Ocean-going commercial vessels passing through the Canal averaged 9 per day. The average tonnage, tolls, etc., per commercial vessel, as compared with last month's traffic, were as follows:

Average per vessel.	This month.	Last month.
United States equivalent net tonnage	3,207	3,141
Panama Canal net tonnage	3,922	3,879
Registered gross tonnage	4,960	4,901
Registered net tonnage	3,166	3,108
Tolls	$3,927.80	$3,803.20
Tons of cargo (2,240 pounds)	3,859	4,219

Included in the January traffic were 33 vessels engaged in the United States coastwise trade, with an aggregate Panama Canal net tonnage of 150,851, and carrying 157,929 tons of cargo. Of these vessels, 17 passed from the Atlantic to the Pacific, with a total tonnage of 86,086, and carrying 76,593 tons of cargo; and 16 passed from the Pacific to the Atlantic, with a total tonnage of 62,765, and carrying 81,336 tons of cargo.

PRINCIPAL COMMODITIES.

Bulk shipments of the various commodities included in the January, 1921, traffic were:

FROM ATLANTIC TO PACIFIC.

Commodity.	From—	To—	Tons.
Coal and coke	South Atlantic ports, U. S.	Chile	24,809
Coal and coke	South Atlantic ports, U. S.	Peru	4,273
Coal and coke	South Atlantic ports, U. S.	New Zealand	21,214
Coal and coke	South Atlantic ports, U. S.	Balboa	11,998
Coal and coke	North Atlantic ports, U. S.	Ecuador	3,300

FROM ATLANTIC TO PACIFIC—continued.

Commodity.	From—	To—	Tons.
Coal and coke	North Atlantic ports, U. S.	Chile	41,216
Coal and coke	North Atlantic ports, U. S.	Far East	1,199
Coal and coke	British Isles	Peru	1,711
Total, coal and coke			110,121
Fuel oil	Mexico	Chile	61,930
Fuel oil	Mexico	Balboa	19,900
Fuel oil	Mexico	West coast, U. S.	29,000
Fuel oil	North Atlantic ports, U. S.	Far East	3,000
Total, fuel oil			113,830
Iron and steel	North Atlantic ports, U. S.	Far East	17,356
Iron and steel	North Atlantic ports, U. S.	West coast, U. S.	26,768
Iron and steel	North Atlantic ports, U. S.	West coast, South America	5,896
Iron and steel	North Atlantic ports, U. S.	Australasia	3,896
Iron and steel	South Atlantic ports, U. S.	Australasia	1,410
Iron and steel	Gulf ports, U. S.	Far East	7,488
Iron and steel	Gulf ports, U. S.	West coast, U. S.	5,100
Iron and steel	Gulf ports, U. S.	West coast, South America	3,910
Iron and steel	Cristobal	Central America	600
Total, iron and steel			72,424
Refined oils	North Atlantic ports, U. S.	Far East	8,500
Refined oils	North Atlantic ports, U. S.	Australasia	5,190
Refined oils	Gulf ports, U. S.	Far East	25,500
Total, refined oils			39,190
Sulphur	Gulf ports, U. S.	West coast, U. S.	7,000
Sulphur	Gulf ports, U. S.	Australasia	6,200
Total, sulphur			13,200
Silver sand	Belgium	West coast, U. S.	7,044
Cement	British Isles	West coast, South America	3,367
Cement	Germany	West coast, South America	1,250
Cement	North Atlantic ports, U. S.	West coast, South America	630
Cement	Norway	West coast, U. S.	500
Total, cement			5,747
Sugar	Cuba	West coast, Canada	4,950
Cotton	Gulf ports, U. S.	Far East	4,241
Chalk	Belgium	West coast, U. S.	1,300
Chalk	Denmark	West coast, U. S.	508
Total, chalk			1,808
Coffee	East coast, South America	West coast, U. S.	1,634
Tobacco	South Atlantic ports, U. S.	Far East	390
Tobacco	South Atlantic ports, U. S.	West coast, U. S.	145
Tobacco	South Atlantic ports, U. S.	Australasia	797
Total, tobacco			1,332

FROM PACIFIC TO ATLANTIC.

Nitrate	Chile	North Atlantic ports, U. S.	13,560
Nitrate	Chile	South Atlantic ports, U. S.	47,506
Nitrate	Chile	Gulf ports, U. S.	15,215
Total to United States			76,281
Nitrate	Chile	Belgium	3,003
Nitrate	Chile	British Isles	13,375
Nitrate	Chile	Denmark	1,700
Nitrate	Chile	France	15,952
Nitrate	Chile	Germany	9,033
Nitrate	Chile	Holland	6,582
Nitrate	Chile	Italy	4,280
Nitrate	Chile	Netherlands	7,723
Nitrate	Chile	Spain	9,887
Nitrate	Chile	Europe [1]	19,744
Total to Europe			91,279

[1] Not designated.

FROM PACIFIC TO ATLANTIC—continued.

Commodity.	From—	To—	Tons.
Nitrate	Chile	Azores [1]	12,100
Nitrate	Chile	West Indies	16,653
Grand total, nitrate			196,313
Wheat	West coast, U. S.	British Isles	9,934
Wheat	West coast, U. S.	France	11,928
Wheat	West coast, U. S.	Italy	15,484
Wheat	West coast, U. S.	Germany	22,260
Total, wheat			59,606
Lumber	West coast, U. S.	British Isles	15,925
Lumber	West coast, U. S.	North Atlantic ports, U. S.	22,464
Lumber	West coast, U. S.	Denmark	1,355
Lumber	West coast, U. S.	Europe [2]	15,172
Lumber	West coast. Central America	Cristobal	236
Lumber	British Columbia	West Indies	3,173
Total, lumber			58,325
Cold storage and food products	Australasia	British Isles	49,766
Cold storage and food products	West coast, U. S.	British Isles	1,116
Total, cold storage and food products			50,882
Refined oils	West coast, U. S.	North Atlantic ports, U. S.	29,476
Refined oils	Peru	East coast, Canada	8,463
Total, refined oils			37,939
Barley	West coast, U. S.	British Isles	18,869
Barley	West coast, U. S.	Germany	2,119
Barley	West coast, U. S.	Europe [2]	2,950
Total, barley			23,938
Ores:			
Manganese	China	North Atlantic ports, U. S.	3,487
Iron	China	North Atlantic ports, U. S.	600
Copper	Chile	North Atlantic ports, U. S.	6,300
Copper	Peru	North Atlantic ports, U. S.	2,575
Chrome	Australia	North Atlantic ports, U. S.	800
Chrome	New Zealand	North Atlantic ports, U. S.	6,824
Tin	Chile	North Atlantic ports, U. S.	800
Tin	Chile	Germany	600
Gold and silver	Peru	North Atlantic ports, U. S.	60
Total, ores			22,046
Copper	British Columbia	North Atlantic ports, U. S.	3,135
Copper	Chile	North Atlantic ports, U. S.	123
Copper	Chile	British Isles	3,087
Copper	Chile	Italy	263
Copper	Australia	British Isles	1,983
Copper	Peru	Cristobal	2,762
Total, copper			11,353
Wool	Australasia	British Isles	8,933
Wool	New Zealand	North Atlantic ports, U. S.	1,500
Wool	China	North Atlantic ports, U. S.	1,882
Wool	Japan	North Atlantic ports, U. S.	323
Total, wool			12,638
Oats	Chile	British Isles	805
Oats	Australasia	British Isles	4,113
Total, oats			4,918
Cotton seed oil cake	Peru	British Isles	663
Cotton seed oil cake	Chile	Denmark	3,625
Total, cotton seed oilcake			4,288
Coffee	Peru	British Isles	3,150
Coffee	Ecuador	North Atlantic ports, U. S.	340
Coffee	Colombia	Cristobal, C. Z.	195
Coffee	Central America	Cristobal, C. Z.	146
Total, coffee			3,831

[1] For orders. [2] Not designated.

FROM PACIFIC TO ATLANTIC—continued.

Commodity.	From—	To—	Tons.
Rice	West coast, U. S.	Germany	997
Rice	West coast, U. S.	Europe [1]	1,273
Rice	China	West Indies	1,500
Total, rice			3,770
Flour	West coast, U. S.	British Isles	1,138
Flour	West coast, U. S.	Germany	1,000
Flour	West coast, U. S.	Europe [1]	1,063
Total, flour			3,201
Canned fish	West coast, U. S.	British Isles	110
Canned fish	West coast, U. S.	North Atlantic ports, U. S.	400
Canned fish	British Columbia	Italy	200
Canned fish	China	North Atlantic ports, U. S.	784
Total, canned fish			1,494
Hemp	New Zealand	British Isles	1,213
Hemp	Philippines	North Atlantic ports, U. S.	192
Total, hemp			1,405
Rubber	China	North Atlantic ports, U. S.	600
Rubber	Malay Peninsula	North Atlantic ports, U. S.	499
Total, rubber			1,099
Sugar	Peru	British Isles	21,356
Guano	Peru	British Isles	4,000
Copra	Australia	British Isles	2,600
Milk powder	New Zealand	British Isles	1,100
Guaiac	Australia	British Isles	254
Canned fruits	West coast, U. S.	North Atlantic ports, U. S.	1,030
Licorice roots	China	North Atlantic ports, U. S.	1,500
Tea	China	North Atlantic ports, U. S.	1,882
Coconut oil	Philippines	North Atlantic ports, U. S.	1,783
Cacao	Ecuador	North Atlantic ports, U. S.	1,640
Ivory nuts	Ecuador	Europe [1]	667

[1] Not designated.

LATIN-AMERICAN TRAFFIC.

Commercial vessels, southbound, engaged in Latin-American trade, for January, 1921, were classified as follows:

Nationality.	No. of ships.	U. S. equivalent net tonnage.	Panama Canal net tonnage.	Registered gross tonnage.	Registered net tonnage.	Tons of cargo.
British	26	54,309	66,418	87,271	53,886	63,354
United States	19	58,784	72,265	96,202	58,384	95,329
Norwegian	9	25,998	31,742	41,304	25,867	55,630
Chilean	8	[1] 6,783	[1] 7,610	[1] 6,119	[1] 3,896	7,884
Dutch	2	6,768	9,360	10,274	6,991	6,532
Danish	2	6,011	6,857	8,460	5,220	12,726
Spanish	2	5,830	6,631	7,834	5,408	4,773
Peruvian	2	2,719	5,345	9,020	4,517	4,110
French	1	5,358	5,408	5,618	3,491	6,698
Japanese	1	3,607	4,990	4,956	3,500	6,381
Italian	1	3,149	3,600	5,355	3,160	950
Swedish	1	2,248	4,089	3,267	2,865	1,735
Costa Rican	1	144	152	158	93	.....
Totals	75	181,708	224,467	285,838	177,278	266,102

[1] Displacement tonnage of 35,562 not included.

This traffic is further classified in the following table:

No. vessels	Registry.	Commodity.	Tons of cargo.	Origin of cargo.
	To west coast of South America—			
7	United States	General merchandise.	18,152	East coast of United States.
4	Norwegian	Coal	23,132	East coast of United States.
1	Norwegian	Iron pipes	2,350	East coast of United States.
1	Norwegian	General	1,548	East coast of United States.
3	British	Coal	13,912	East coast of United States.
1	British	General	1,515	East coast of United States.
2	Danish	Coal	12,726	East coast of United States.
1	French	Coal	6,698	East coast of United States.
1	Japanese	Coal	6,381	East coast of United States.
1	Chilean	Coal	4,984	East coast of United States.
1	Spanish	Coal	4,773	East coast of United States.
23			96,171	East coast of United States.

No. vessels	Registry.	Commodity.	Tons of cargo.	Destined to—
	To west coast of South America—Contd.			
1	Spanish	Ballast		British Isles.
1	British	Ballast		British Isles.
4	British	General	12,225	British Isles.
1	Peruvian	General	2,139	British Isles.
2	Dutch	General	6,532	Holland.
1	British	General	4,500	Belgium.
1	Swedish	General	1,735	Norway.
1	Italian	General	959	Italy.
12			28,801	
8	British	General	5,310	Cristobal, C. Z.
1	Peruvian	General	1,971	Cristobal, C. Z.
1	Chilean	General	400	Cristobal, C. Z.
1	United States	General	63	Cristobal, C. Z.
11			7,744	Cristobal, C. Z.
3	United States	Fuel oil	28,170	East coast of Mexico.
2	Norwegian	Fuel oil	18,700	East coast of Mexico.
2	British	Fuel oil	15,060	East coast of Mexico.
7			61,930	East coast of Mexico.
1	Chilean	Ammunition	2,500	West Indies.
5	Chilean	Ballast		West Indies.
6			2,500	West Indies.
1	British	Ballast		East coast of Canada.
	To west coast of United States—			
2	United States	Oil	20,000	East coast of Mexico.
1	British	Oil	9,000	East coast of Mexico.
2	United States	General	3,013	Cristobal, C. Z.
1	United States	General	1,566	West Indies.
1	British	Ballast		West Indies.
1	United States	Coffee, general	2,367	East coast of South America.
8			35,946	
	To west coast of Central America—			
2	British	General	1,085	Cristobal, C. Z.
1	Costa Rican	Ballast		Cristobal, C. Z.
1	British	General	747	Europe.
4			1,832	
	To Balboa, C. Z.—			
1	United States	Fuel oil	10,000	East coast of Mexico.
1	Norwegian	Fuel oil	9,900	East coast of Mexico.
1	United States	Coal	11,998	East coast of United States.
3			31,898	
75	Total Latin-American traffic, Atlantic to Pacific		266,102	

The Latin-American traffic, northbound, through the Canal, for January, 1921, is classified in the following tabulation:

Nationality.	No. of ships.	U. S. equivalent net tonnage.	Panama Canal net tonnage.	Registered gross tonnage.	Registered net tonnage.	Tons of cargo.
British	31	71,031	90,394	114,159	69,791	99,103
United States	29	83,133	96,914	130,526	82,183	71,973
Norwegian	7	24,773	28,566	37,741	25,329	19,304
Danish	5	10,770	14,233	16,560	10,391	25,096
Spanish	3	6,074	7,183	9,588	6,293	12,550
Peruvian	3	5,358	8,267	11,838	7,452	7,657
French	2	6,481	6,459	8,876	5,643	6,000
Italian	2	5,981	7,882	10,603	6,416	6,970
Japanese	2	5,548	6,023	7,969	5,093	11,022
Dutch	1	4,384	6,807	6,944	4,414	10,000
Chilean	1	1,463	2,577	2,553	1,600	352
Costa Rican	1	144	152	158	93	236
Totals	87	225,140	275,457	357,515	224,698	270,263

This traffic is further classified in the following tabulation:

No. vessels	Registry.	Commodity.	Tons of cargo.	Destined to—
	From west coast of South America—			
7	United States	Nitrate	40,798	East coast of United States.
5	United States	General merchandise.	13,333	East coast of United States.
2	United States	Ballast	.....	East coast of United States.
5	British	General	8,887	East coast of United States.
1	British	Nitrate	5,900	East coast of United States.
2	Danish	Nitrate	7,263	East coast of United States.
1	Norwegian	Cacao	1,350	East coast of United States.
1	Norwegian	Ballast	.....	East coast of United States.
1	Spanish	Nitrate	4,000	East coast of United States.
25	.....	.....	81,531	East coast of United States.
5	British	General merchandise.	31,410	British Isles.
1	British	Sugar	7,050	British Isles.
1	British	Nitrate	5,856	British Isles.
1	United States	Nitrate	7,500	British Isles.
1	French	Nitrate	6,000	British Isles.
1	Peruvian	Guano	4,000	British Isles.
1	Dutch	Nitrate	10,000	Holland.
1	British	Nitrate	6,582	Holland.
1	Danish	Nitrate	5,977	France.
1	British	Nitrate	5,622	France.
1	Spanish	Nitrate	4,413	France.
1	British	Nitrate	5,750	Spain.
1	Spanish	Nitrate	4,137	Spain.
2	Italian	General merchandise.	6,970	Italy.
1	British	Nitrate	7,723	Germany.
1	Danish	Nitrate	5,338	Denmark.
1	British	General merchandise.	5,276	Belgium.
1	Norwegian	Nitrate	7,723	Europe.[1]
1	Danish	Nitrate	6,518	Europe.[1]
24	.....	.....	143,845	Europe.
6	British	General merchandise.	1,160	Cristobal, C. Z.
2	Peruvian	General merchandise.	3,657	Cristobal, C. Z.
1	United States	General merchandise.	573	Cristobal, C. Z.
1	Chilean	General merchandise.	352	Cristobal, C. Z.
10	.....	.....	5,742	Cristobal, C. Z.
2	United States	Ballast	.....	East coast of Mexico.
2	Norwegian	Ballast	.....	East coast of Mexico.
2	British	Ballast	.....	East coast of Mexico.
6	.....	.....	.....	East coast of Mexico.
1	Norwegian	Nitrate	10,231	Trinidad.
1	Japanese	Nitrate	6,422	St. Thomas.
2	.....	.....	16,653	West Indies.
1	British	Nitrate	7,500	Azore Islands.[2]
1	Japanese	Nitrate	4,600	Azore Islands.[2]
2	.....	.....	12,100	Azore Islands.[2]
1	United States	Gasoline	8,463	East coast of Canada.
	From west coast of Central America—			
3	British	General merchandise.	387	Cristobal, C. Z.
1	British	Ballast	.....	Cristobal, C. Z.
1	Costa Rican	Fustic	236	Cristobal, C. Z.
1	United States	Ore	589	East coast of United States.
1	United States	Ballast	.....	East coast of United States.
7	.....	.....	1,212	.....
	From west coast of United States—			
3	United States	General merchandise.	717	Cristobal, C. Z.
1	United States	Ballast	.....	East coast of Mexico.
4	.....	.....	717	.....
	From Balboa, C. Z.—			
2	United States	Ballast	.....	East coast of United States.
1	United States	Ballast	.....	East coast of Mexico.
1	Norwegian	Ballast	.....	East coast of Mexico.
4	.....	.....	.....	.....

[1] Not designated. [2] For orders.

No. vessels	Registry.	Commodity.	Tons of cargo.	Destined to—
	From west coast of Canada—			
1	United States	Ballast		East coast of Mexico.
	From west coast of Mexico—			
1	French	Ballast		East coast of Mexico.
87	Total Latin-American traffic, Pacific to Atlantic		270,263	

Included in the January traffic were 37 vessels under control of the United States Shipping Board, combining a total Panama Canal net tonnage of 156,635, and cargo of 168,133 tons; the tolls on these vessels aggregated $158,038.14. Of the above vessels, 14 were southbound, with a total Panama Canal net tonnage of 59,758 tons, and cargo of 70,058 tons; 23 were northbound, with a Panama Canal net tonnage of 96,877 tons and cargo of 98,075 tons. In addition to the foregoing, 7 vessels under control of the Shipping Board, with a combined Panama Canal net tonnage of 33,850 tons, and carrying 54,434 tons of fuel for the Navy, passed through the Panama Canal southbound during the month.

Statements attached to this report show the origin and destination of all cargo passing through the Canal during January, 1921 (*see* pages 446 and 447); the following tabulation gives the classification of the traffic over the principal trade routes:

	Total vessels.			Vessels in ballast.	
	Number.	Panama Canal net tonnage.	Cargo.	Number.	Panama Canal net tonnage.
Atlantic to Pacific.					
East coast of United States to west coast of South America	23	69,204	96,171		
United States coastwise	17	88,086	76,593		
East coast of United States to Far East	12	51,263	82,248		
East coast of United States to Autralasia	12	63,637	78,221	1	5,488
Europe to west coast of South America	12	47,599	28,081	2	8,290
Cristobal to west coast of South America	11	15,846	7,744	1	69
Europe to west coast of United States	7	37,549	15,292	1	5,303
Mexico to west coast of South America	7	34,331	61,930		
West Indies to west coast of South America	6	[2] 2,286	2,500		
Europe to Australasia	5	30,946	26,715	1	4,909
Mexico to west coast of United States	3	15,748	29,000		
Europe to west coast of Canada	3	12,927	5,075	2	9,994
Cristobal to west coast of Central America	3	1,466	1,085	1	152
Mexico to Balboa, C. Z.	2	10,485	19,900		
Cristobal to west coast of United States	2	4,061	3,013		
West Indies to west coast of United States	2	8,684	1,566	1	4,806
East coast of United States to Balboa	1	6,930	11,998		
East coast of United States to Philippines	1	4,819	6,912		
East coast of South America to west coast of United States	1	4,914	2,367		
Foreign ships in ballast between United States coastwise ports	1	4,253		1	4,253
East coast of Canada to west coast of South America	1	1,595		1	1,595
Europe to west coast of Central America	1	918	747		
East coast of United States to Society Islands	1	172			
Totals for January, 1921	134	517,719	557,158	[3] 12	44,859
Totals for December, 1920	145	554,932	619,451	8	24,230
Totals for January, 1920	113	350,973	314,510	40	94,091
Pacific to Atlantic.					
West coast of South America to east coast of United States	25	70,513	81,531	3	6,816
West coast of South America to Europe	24	96,358	143,845		
United States coastwise	16	62,765	81,336	1	5,222
West coast of United States to Europe	15	77,381	106,140		
Australasia to Europe	14	101,145	88,358		
West coast of South America to Cristobal	10	14,378	5,742		
Far East to east coast of South America	6	26,843	25,039	1	3,837
West coast of South America to east coast of Mexico	6	27,795		6	27,795
West coast of Central America to Cristobal	5	[4] 3,263	623		
West coast of Canada to Europe	4	18,952	26,360		
Australasia to east coast of United States	3	14,061	22,399		
West coast of United States to Cristobal	3	5,654	717		
Balboa, C. Z., to east coast of United States	2	11,720		2	11,720
Balboa, C. Z., to east coast of Mexico	2	10,485		2	10,485
West coast of South America to West Indies	2	9,725	16,653		
West coast of South America to Azore Islands [1]	2	6,239	12,100		

[1] For orders.
[2] Five Chilean warships totaling 35,562 tons displacement, not included in tonnage figures.
[3] Includes 3 ships carrying excess fuel.
[4] British cruiser of 4,193 tons displacement not included in tonnage figures.

	Total vessels.			Vessels in ballast.	
	Number.	Panama Canal net tonnage.	Cargo.	Number.	Panama Canal net tonnage.
Pacific to Atlantic—Continued.					
West coast of Central America to east coast of United States	2	2,231	589	1	1,701
West coast of South America to east coast of Canada	1	5,429	8,463	.....	.....
West coast of United States to east coast of Mexico	1	5,234	.....	1	5,234
West coast of Canada to east coast of Mexico	1	4,337	.....	1	4,337
Mexican coastwise ports	1	2,096	.....	1	2,096
Totals for January, 1921	145	576,604	619,895	19	79,243
Totals for December, 1920	120	472,986	457,088	19	82,547
Totals for January, 1920	125	414,560	580,118	5	20,610

SERVICES TO CANAL SHIPPING.

Miscellaneous repairs were made at Cristobal and Balboa shops and dry docks on 130 vessels and craft during January; 82 at Cristobal and 48 at Balboa. Of these, 23 were dry-docked; 8 at Cristobal, and 15 at Balboa. Bunker coal, in the amount of 45,347 tons, was supplied to 133 commercial vessels; 39,215 tons to 111 vessels at Cristobal; and 6,132 tons to 22 vessels at Balboa. Three commercial vessels were supplied with a total of 9,813 barrels of fuel oil; 1 vessel with 5,585 barrels at Cristobal, and 2 vessels with 4,228 barrels at Balboa. Water to the amount of 19,156,147 gallons was supplied to 350 vessels; 9,789,397 gallons to 182 vessels at Cristobal, and 9,366,750 gallons to 168 vessels at Balboa. Sales of commissary supplies to commercial ships, other than those of the Panama Railroad Steamship Line, aggregated $96,317.12, including $2,742.89 for laundry service; these sales were made to 186 vessels at Cristobal in the amount of $58,702.62; and to 88 vessels at Balboa in the amount of $37,614.50. Receipts for tug and launch service totaled $49,748.90, of which $25,833 were earned at Cristobal, and $23,915.90 at Balboa. Fees for pilotage totaled $15,447, of which $9,559 were earned at Cristobal, and $5,888 at Balboa.

STATEMENT OF OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Canal are shown in the following tabulation:

Item.	Cristobal.	Balboa.	Total.
Commercial ships passing through the Canal	134	145	279
Tonnage of above vessels:			
Panama Canal net measurements	517,719	576,604	1,094,323
United States equivalent	423,206	471,483	894,689
Registered gross	649,877	733,901	1,383,778
Registered net	411,827	471,535	883,362
Cargo through Canal in commercial vessels—tons of 2,240 pounds	557,158	619,895	1,177,053
Deck cargo included in above	601	3,992	4,593
Nationality of commercial vessels through the Canal:			
British	47	53	100
Chilean	8	1	9
Costa Rican	1	1	2
Danish	4	6	10
Dutch	3	4	7
French	2	2	4
Italian	1	2	3
Japanese	6	4	10
Norwegian	11	7	18
Peruvian	2	3	5
Spanish	2	3	5
Swedish	2	1	3
United States	45	58	103
Total for January, 1921	134	145	279
Total for December, 1920	145	120	265
Total for January, 1920	113	125	238
United States equivalent net tonnage of commercial vessels by nationality:			
British	146,868	185,722	332,590
Chilean	6,783	1,463	8,246
Costa Rican	144	144	288
Danish	15,465	15,014	30,479
Dutch	11,631	17,406	29,037
French	7,622	6,481	14,103
Italian	3,149	5,981	9,130

Item.	Cristobal.	Balboa.	Total.
United States equivalent net tonnage of commercial vessels by nationality—Continued.			
Japanese	20,655	13,460	34,115
Norwegian	33,254	24,773	58,027
Peruvian	2,719	5,358	8,077
Spanish	5,830	6,074	11,904
Swedish	4,780	2,244	7,024
United States	164,306	187,363	351,669
Totals for January, 1921	423,206	471,483	894,689
Totals for December, 1920	449,204	383,203	832,407
Totals for January, 1920	289,674	346,616	636,290
Panama Canal net tonnage of commercial vessels by nationality:			
British	181,411	231,515	412,926
Chilean	7,610	2,577	10,187
Costa Rican	152	152	304
Danish	17,818	19,551	37,369
Dutch	15,426	22,013	37,439
French	8,341	6,459	14,800
Italian	3,600	7,882	11,482
Japanese	23,983	16,273	40,256
Norwegian	41,622	28,566	70,188
Peruvian	5,345	8,267	13,612
Spanish	6,631	7,183	13,814
Swedish	7,825	4,019	11,844
United States	197,955	222,147	420,102
Totals for January, 1921	517,719	576,604	1,094,323
Totals for December, 1920	554,932	472,986	1,027,918
Totals for January, 1920	350,973	414,560	765,533
Registered gross tonnage of commercial vessels by nationality:			
British	229,838	290,989	520,827
Chilean	6,119	2,553	8,672
Costa Rican	158	158	316
Danish	20,680	23,197	43,877
Dutch	17,029	25,866	42,895
French	9,181	8,876	18,057
Italian	5,355	10,603	15,958
Japanese	31,128	20,777	51,905
Norwegian	52,739	37,741	90,480
Peruvian	9,020	11,838	20,858
Spanish	7,834	9,588	17,422
Swedish	7,264	3,745	11,009
United States	253,532	287,970	541,502
Totals for January, 1921	649,877	733,901	1,383,778
Totals for December, 1920	698,602	600,262	1,298,864
Totals for January, 1920	459,631	532,393	992,024
Registered net tonnage of commercial vessels by nationality:			
British	144,562	181,514	326,076
Chilean	3,896	1,600	5,496
Costa Rican	93	93	186
Danish	12,941	14,627	27,568
Dutch	11,790	17,455	29,245
French	5,784	5,643	11,427
Italian	3,160	6,416	9,576
Japanese	20,361	12,967	33,328
Norwegian	33,072	25,329	58,401
Peruvian	4,517	7,452	11,969
Spanish	5,408	6,293	11,701
Swedish	5,644	2,858	8,502
United States	160,599	189,288	349,887
Totals for January, 1921	411,827	471,535	883,362
Totals for December, 1920	441,336	382,422	823,758
Totals for January, 1920	292,070	340,084	632,154
Tolls levied against commercial vessels by nationality:			
British	$179,399.62	$229,169.56	$408,569.18
Chilean	25,649.35	1,828.75	27,478.10
Costa Rican	109.44	180.00	289.44
Danish	17,864.41	18,657.40	36,521.81
Dutch	14,538.75	21,545.70	36,084.45
French	9,319.60	6,851.85	16,171.45
Italian	3,936.25	7,476.25	11,412.50
Japanese	25,684.25	16,732 45	42,416.70

Item.	Cristobal.	Balboa.	Total.
Tolls levied against commercial vessels by nationality—Continued.			
Norwegian	$41,198.29	$24,925.09	$66,123.38
Peruvian	3,398.75	6,604.65	10,003.40
Spanish	5,330.50	7,592.50	12,923.00
Swedish	5,975.00	2,805.00	8,780.00
United States	203,420.10	215,663.95	419,084.05
Totals for January, 1921	$535,824.31	$560,033.15	1,095,857.46
Totals for December, 1920	554,809.41	453,039.91	1,007,849.32
Totals for January, 1920	341,548.28	425,223.21	766,771.49
Tons of cargo carried by commercial vessels by nationality:			
British	180,179	241,306	421,485
Chilean	7,884	352	8,236
Costa Rican	.....	236	236
Danish	14,126	33,386	47,512
Dutch	8,925	34,441	43,366
French	11,773	6,000	17,773
Italian	950	6,970	7,920
Japanese	34,014	18,477	52,491
Norwegian	60,463	19,304	79,767
Peruvian	4,110	7,657	11,767
Spanish	4,773	12,550	17,323
Swedish	7,547	5,200	12,747
United States	222,414	234,016	456,430
Totals for January, 1921	557,158	619,895	1,117,053
Totals for December, 1920	619,451	457,088	1,076,539
Totals for January, 1920	314,510	580,118	894,628
Classification of toll-paying vessels through the Canal:			
Cargo ships, laden	116	125	241
Cargo ships, ballast	9	19	28
Cargo ships, unladen, excess fuel	3	.....	3
Warships	4	1	5
Tug	1	.....	1
Yacht	1	.....	1
Launches (under 10 tons)	3	1	4
Total toll-paying vessels	137	146	283
Tonnage of above ships, Panama Canal measurement:			
Cargo ships, laden	472,688	497,361	970,049
Cargo ships, ballast	30,166	79,243	109,409
Cargo ships, unladen, excess fuel	14,693	.....	14,693
Warships (displacement tonnage)	34,900	4,193	39,093
Tug (displacement tonnage)	662	.....	662
Yacht	172	.....	172
Launches	10	7	17
Tolls on above ships:			
Cargo ships, laden	$481,325.55	$500,656.75	$981,982.30
Cargo ships, ballast	21,000.66	57,279.90	78,280.56
Cargo ships, unladen, excess fuel	15,588.10	.....	15,588.10
Warships	17,450.00	2,096.50	19,546.50
Tug	331.00	.....	331.00
Yacht	129.00	.....	129.00
Launches	2.25	5.25	7.50
Total tolls	$535,826.56	$560,038.40	1,095,864.96
Motor ships through Canal	6	8	14
Net tonnage of same, Panama Canal measurement	15,309	15,746	31,055
Sailing vessels through Canal	.....	2	2
Net tonnage of same, Panama Canal measurement	.....	1,590	1,590
Classification of vessels through the Canal free of tolls:			
United States Navy vessels—			
Battleships	8	1	9
Cruiser	.....	1	1
Colliers	5	4	9
Destroyers	19	.....	19
Submarines	6	1	7
Tugs	3	.....	3
Mine sweepers	1	1	2
Submarine chasers	2	1	3
Submarine tenders	1	1	2
Navy supply ships	2	.....	2
Repair ship	1	.....	1
Hospital ship	1	.....	1
Launch	.....	1	

Item.	Cristobal.	Balboa.	Total.
Classification of vessels through the Canal free of tolls—Continued.			
United States Army vessels—			
Transports	2	.....	2
Mine planters	.....	1	1
Tugs	1	1	2
Launches	1	1	2
Vessels carrying supplies for Navy	7	.....	7
Total	60	14	74
Cargo carried by above vessels on which no tolls were charged	76,429	.....	76,429
Number, registered net and gross tonnage of vessels entering and clearing Canal ports, including ships transiting Canal:			
Numbering entering	381	378	759
Numbering clearing	382	372	754
Total, entering and clearing	763	750	1,513
Registered net tonnage of above:			
Entering	1,490,172	1,645,231	3,135,403
Clearing	1,498,458	1,642,857	3,141,315
Total, entering and clearing	2,988,630	3,288,088	6,276,718
Registered gross tonnage of above:			
Entering	2,129,659	2,182,735	4,312,394
Clearing	2,146,108	2,176,075	4,322,183
Total, entering and clearing	4,275,767	4,358,810	8,634,577
Vessels entering port but not transiting Canal:			
Entering	62	43	105
Clearing	68	39	107
Registered net tonnage of above:			
Entering	210,935	347,628	558,563
Clearing	225,211	331,958	557,169
Registered gross tonnage of above:			
Entering	327,501	353,652	681,153
Clearing	352,083	337,982	690,065
Vessels transiting Canal and handling passengers or cargo at port:			
Number entering	45	57	102
Number clearing	44	57	101
Registered net tonnage of above:			
Entering	126,382	153,310	279,692
Clearing	124,308	167,506	291,804
Registered gross tonnage of above:			
Entering	184,449	251,044	435,493
Clearing	181,792	263,387	445,179
Transit cargo arriving ..... tons	1,258,275	1,203,578	2,461,853
Transit cargo clearing ..... tons	1,260,874	1,203,790	2,464,664
Local cargo arriving ..... tons	45,679	79,299	124,978
Local cargo shipped ..... tons	2,225	308	2,533
Cargo received for transshipment ..... tons	16,568	11,170	27,738
Cargo transshipped ..... tons	26,400	90	26,490
Cargo handled by Receiving and Forwarding Agency, Panama Railroad:			
Received ..... tons	37,300	1,333	38,633
Dispatched ..... tons	26,450	2,004	28,454
Rehandled ..... tons	2,701	674	3,375
Stevedored (included in above) ..... tons	22,357	566	22,923
Vessels supplied with bunker coal:			
Commercial vessels, other than Panama Railroad	107	22	129
Panama Railroad vessels	4	.....	4
United States Army vessels	4		6
Total vessels	115	24	139
Coal supplied above vessels:			
Commercial, other than Panama Railroad ..... tons	37,963	6,132	44,095
Panama Railroad vessels ..... tons	1,252	.....	1,252
United States Army vessels ..... tons	1,958	21	1,979
Total coal supplied to vessels ..... tons	41,173	6,153	47,326
Coal issues, miscellaneous:			
Panama Railroad departments ..... tons	1,141	120	1,261
United States Army, excepting vessels ..... tons	102	.....	102
Panama Canal departments ..... tons	1,355	497	1,852
Individuals and companies ..... tons	368	.....	368
Total coal furnished from Panama Canal deposits ..... tons	44,139	6,770	50,909

Item.	Cristobal.	Balboa.	Total.
Coal on hand, February 1, 1921 ... tons	85,392	7,994	93,386
Coal on hand, January 1, 1921 ... tons	46,033	2,766	48,799
Coal received during January, 1921 ... tons	83,498	11,998	95,496
Coal—U. S. Navy account.			
Issued to United States Navy, including vessels ... tons	1,047	11,464	12,511
Coal on hand, February 1, 1921 ... tons	54,972	35,769	90,741
Coal on hand, January 1, 1921 ... tons	54,965	24,522	79,487
Received during January, 1921 ... tons	1,054	22,711	23,765
Vessels supplied with fuel oil from Panama Canal tanks:			
Commercial vessel other than Paoama Railroad	.....	1	1
Panama Railroad vessels	1	1	2
United States Army vessels	1	1	2
Total vessels	2	3	5
Fuel oil supplied to above vessels:			
Commercial vessels other than Panama Railroad ... bbls	.....	2,200	2,200
Panama Railroad vessels ... bbls	5,585	2,028	7,613
United States Army vessels ... bbls	191	440	631
Total issues to vessels ... bbls	5,776	4,668	10,444
Fuel oil issues, miscellaneous:			
To United States Army and Navy ... bbls	204	.....	204
To Panama Canal departments ... bbls	9,123	15,777	24,900
To Panama Railroad departments ... bbls	577	.....	577
To individuals and companies ... bbls	1,180	5,263	6,443
Total issues from Panama Canal tanks ... bbls	16,860	25,708	42,568
Fuel oil on hand, February 1, 1921 ... bbls	139,301	113,895	253,196
Fuel oil on hand, January 1, 1921 ... bbls	96,256	139,603	235,859
Fuel oil received during January, 1921 ... bbls	59,905	.....	59,905
Fuel oil pumped for individuals and companies ... bbls	221,439	403,283	624,722
Diesel oil issued during the month ... bbls	95	32	127
Diesel oil on hand, February 1, 1921 ... bbls	53,366	1,051	54,417
Diesel oil on hand, January 1, 1921 ... bbls	53,461	1,083	54,544
Vessels supplied with water	182	168	350
Water sold to above vessels ... gallons	9,789,397	9,366,750	19,156,147
Vessels furnished commissary supplies:			
Commercial, other than Panama Railroad	186	88	274
Panama Railroad vessels	14	1	15
United States Government vessels	22	79	101
Total vessels furnished supplies	222	168	390
Commissary sales to commercial vessels:			
Ice	$2,276.00	$779.40	$3,055.40
Wholesale groceries	10,943.79	11,895.09	22,838.88
Wholesale cold storage	39,596.84	22,499.18	62,096.02
Laundry	2,241.72	501.17	2,742.89
Miscellaneous	3,644.27	1,939.66	5,583.93
Total	$58,702.62	$37,614.50	$96,317.12
Commissary sales to Panama Railroad vessels.			
Ice	$167.00	.....	$167.00
Wholesale groceries	1,710.03	7.55	1,717.58
Wholesale cold storage	7,825.66	172.72	7,998.38
Laundry	1,960.85	.....	1,960.85
Miscellaneous	1,086.44	.....	1,086.44
Total	$12,749.98	$180.27	$12,930.25
Commissary sales to government vessels:			
Ice	$377.35	$1,362.70	$1,740.05
Wholesale groceries	1,299.82	16,347.79	17,647.61
Wholesale cold storage	14,743.77	41,350.52	56,094.29
Laundry	1,328.65	26.55	1,987.40
Miscellaneous	781.82	2,184.83	2,966.65
Total	$18,531.41	$61,272.39	$79,803.80
Total commissary sales to all vessels:			
Month of January, 1921	$89,984.01	$99,067.16	$189,051.17
Month of December, 1920	$89,007.80	$37,540.71	$126,548.51
Month of January, 1920	$127,465.78	$36,527.73	$163,993.51

Item.	Cristobal.	Balboa.	Total.
Movement of passengers.			
Disembarking at Canal ports:			
First class—			
From Atlantic ports	1,200	1	1,201
From Pacific ports	214	135	349
Total, first class	1,414	136	1,550
Other than first class—			
From Atlantic ports	1,344	.....	1,344
From Pacific ports	85	187	272
Total, other than first class	1,429	187	1,616
Total disembarking at Canal ports	2,843	323	3,166
Embarking from Canal ports:			
First class—			
For Atlantic ports	949	6	955
For Pacific ports	224	163	387
Total, first class	1,173	169	1,342
Other than first class—			
For Atlantic ports	824	2	826
For Pacific ports	56	71	127
Total, other than first class	880	73	953
Total embarking at Canal ports	2,053	242	2,295
Remaining on board vessels:			
First class—			
Bound from Atlantic to Pacific ports	568	616	1,184
Bound from Pacific to Atlantic ports	319	301	620
Bound from Atlantic to Atlantic ports	473	.....	473
Bound from Pacific to Pacific ports	.....	82	82
Total, first-class	1,360	999	2,359
Other than first class—			
Bound from Atlantic to Pacific ports	1,029	1,286	2,315
Bound from Pacific to Atlantic ports	372	435	807
Bound from Atlantic to Atlantic ports	90	.....	90
Bound from Pacific to Pacific ports	.....	870	870
Total, other than first class	1,491	2,591	4,082
Total remaining on board	2,851	3,590	6,441
Total passengers arriving	5,694	3,913	9,607
Total passengers departing	4,904	3,832	8,736
Arrivals in excess of departures	790	81	871
Services to American seamen:			
Seamen paid off	133	76	209
Seamen shipped	122	113	235
Seamen deserted	6	4	10
Seamen lodged and subsisted	28	19	47
Seamen repatriated	21	5	26
Wages of American seamen:			
Total amount of wages earned	$18,101.70	$9,742.88	$27,844.58
Deductions approved by Deputy Shipping Commissioner	7,396.83	1,856.77	9,253.60
Balance due seamen	$10,704.87	$7,886.11	$18,590.98
Paid to seamen	6,424.28	6,531.36	12,955.64
Received on deposit for seamen	4,280.59	1,354.75	5,635.34
Services to American vessels:			
Crew shipped	1	.....	1
Crew paid off	1	.....	1
Shipping article written	1	.....	1
Marine notes of protest noted	15	9	24
Bills of health issued	201	164	365
Clearances issued	196	138	334

LOCK OPERATION.

The following tabulations give the number of lockages, vessels through the locks, and the consumption of water for lockages, for the month of January, 1921:

COMMERCIAL VESSELS ONLY.

	Number of lockages.			Number of vessels.		
	North.	South.	Total.	North.	South.	Total.
Gatun	140	130	270	148	144	292
Pedro Miguel	137	131	268	147	142	289
Miraflores	141	133	274	147	143	290
Totals	418	394	812	442	429	871

TOTAL LOCKAGES OF VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Lockages.			
Commercial	270	268	274
Noncommercial, Army and Navy	33	39	38
Noncommercial, Canal equipment	10	27	16
Totals for January, 1921	313	334	328
Totals for December, 1920	278	265	299
Totals for January, 1920	241	265	233
Vessels.			
Commercial	292	289	290
Noncommercial, Army and Navy	72	70	70
Noncommercial, Canal equipment	28	54	29
Totals for January, 1921	392	413	389
Totals for December, 1920	320	345	343
Totals for January, 1920	309	326	316

CONSUMPTION OF WATER FOR LOCKAGES, LEAKAGE, ETC.

	Gatun.	Pedro Miguel.	Miraflores.
	Cubic feet.	*Cubic feet.*	*Cubic feet.*
Lockages	1,222,860,000	1,053,450,000	989,270,000
Leakage	30,000,000	12,200,000	59,000,000
Maintenance	.....	54,000,000	.....
Total consumption ,January, 1921	1,252,860,000	1,219,650,000	1,048,270,000
Total consumption, December, 1920	1,183,140,000	968,970,000	974,870,000
Total consumption, January. 1920	1,026,020,000	918,470,000	769,150,000

METEOROLOGY AND HYDROGRAPHY.

The rainfall for the month was generally below normal; the totals ranging from 0.02 inch at Rio Grande to 6.74 inches at Cucherbo station in the Trinidad Valley. The greatest amount of precipitation recorded on any one day was 1.80 inches at Monte Lirio. on the 30th.

The estimated rainfall over the Gatun Lake watershed was 2.52 inches, compared with a 11-year mean of 1.80 inches, and over the Chagres River basin above Alhajuela it was 1.71 inches, compared with a 20-year mean of 3.01 inches.

The discharge of the Chagres River at Alhajuela was 1,006 c. f. s., being 48 per cent below the 20-year January average of 1,953 c. f. s., and furnished 48 per cent of the Gatun Lake total yield. The maximum momentary discharge for the month was 2,475 c. f. s. at elevation 92.62 feet on the 29th, and the minimum flow was 714 c. f. s. on several dates.

The Gatun Lake watershed total yield was 2,093 c. f. s., being 18 per cent below the 11-year January mean of 2,566 c. f. s. The maximum total yield for January was 3,827 c. f. s. in 1918, and the minimum total yield was 1,371 c. f. s. in 1912. The net yield for the month was 1,216 c. f. s. which is 35 per cent below the 11-year January average of 1,874 c. f. s. The lake varied in elevation from a maximum of 86.98 feet on the 2d to a minimum of 86.10 on the 27th, averaging 86.51 feet, and ended at 86.16 feet midnight the 31st. A decrease in storage of 3.65 billion cubic feet occurred during the month, compared with 4.20 billion cubic feet for January, 1920.

The draft on the lake for lockages and power was 2,506 c. f. s., compared with 2,378 c. f. s. for December, 1920, and 2,284 c. f. s. for January, 1920. The ratio of water used for power and lockages was 1.88 to 1. The maximum number of lockages of record occurred this month, with 313 at Gatun and 334 at Pedro Miguel; this is 35 and 42 more lockages, respectively, than for the previous record month.

Miraflores Lake varied from a maximum elevation of 54.60 feet on the 20th to a minimum elevation of 52.75 feet on the 5th, averaged 53.63 feet, and ended at elevation 53.78 feet midnight the 31st.

Two seismic disturbances were recorded during the month, occurring on the 9th and 20th, respectively. The distance of the epicenter for the disturbance of the 9th, as indicated by the records obtained, was about 1,500 miles; and for that of the 20th, about 265 miles.

ELECTRICAL DIVISION.

The combined gross output of the Gatun hydroelectric station for January was 6,285,900 KWH, on a computed water consumption of 4,383,193,500 cubic feet. The combined gross output of the Miraflores steam plant was 57,340, with an oil consumption of 2,542 barrels.

The total gross output of both stations was 6,343,240 KWH. The total loss in power in plant auxiliaries, transmission and transformation was 994,396 KWH, or 15.67 per cent of gross output.

Miscellaneous repairs and installations of electrical equipment were made on 63 vessels during the month, 31 at Cristobal and 32 at Balboa.

The following work was under progress during the month, with completion on January 31, as shown:

	Per cent completed.
Installation of 4 K-5 switches at Miraflores substation	75
Installation of two 1,000-ampere, K-12 switches at Cristobal substation	85
Installation of new 8,400 KVA transformer and new tie-line equipment at Gatun substation	[1] 63
Installation of 2 complete feeder equipments at Balboa substation	[1] 95
Installation of three 400,000 c/m conductor tie lines between Gatun hydroelectric and substation	[1] 95
Installation of transformers and other electrical work at new incinerator, Cristobal	100
Extension of underground distribution in New Cristobal	30

[1] Indicates that no work was done during the month.

SHOP, FOUNDRY, AND DRY DOCK WORK.

During the month the combined Atlantic and Pacific fleets of the United States Navy visited the Canal, and the shops and dry dock were of service in affording repairs to the fleet.

The *New Mexico*, the latest, largest, and most powerful superdreadnought of the United States Navy, was placed in dry dock before proceeding south with the combined fleets. This vessel has a normal displacement of 32,000 tons, is 624 feet long, 97 feet 4 inches beam, and 37 feet draft. Although this is the largest battleship in the United States Navy, her docking used up only 60 per cent of the available length of Balboa dry dock, 90 per cent of the width, and 75 per cent of the depth.

The Navy oil tanker *Neches* arrived broken down on account of boiler trouble, and extensive repairs were carried out. Her uptakes were removed, cut apart, faired, and replaced; many boiler tubes renewed or rerolled, casings made tight, and fireroom made nearly air-tight. The forced draft blowers were overhauled. The work was done under pressure and carried on continuously day and night, owing to the necessity of this vessel proceeding south with a cargo of oil for the fleet.

Just preceding the arrival of the Pacific fleet, the Chilean superdreadnought *Almirante Latorre* was placed in dry dock at Balboa, cleaned and painted, and repairs made to her hull and rudder in 2 days' time, during which it was necessary to work day and night. This vessel, with the exceptions of the steamship *Von Steuben* and the battleship *New Mexico* is the largest ship to have been docked in the Balboa dry dock, and because of her great concentration of weights and broad beam constituted the most complicated docking that the Balboa dock has ever had to undertake.

The rebuilding of the steamship *Marne* was completed during the month, and successful dock and sea trials of the vessel were held. The steamship *S. V. Harkness* was dry-docked and repairs to shaft and propeller carried out. A new set of manganese bronze propeller blades were manufactured by the Balboa shops and installed.

The steamship *Bahia Castillo* was dry-docked and repairs made to the stern tube packing. This ship had about 600 passengers on board, and providing sanitary facilities for such a number was the largest problem connected with her visit.

The steamship *Sussex*, which was damaged through piling up on the Cristobal breakwater, was placed in dry dock for rebuilding her bow. The motorship *Siam* was dry-docked and several thousand leaking rivets in her hull made tight. The rebuilding of the tug *Bohio* was advanced to within about 85 per cent of completion.

In addition to the above, miscellaneous repairs were made at the Balboa shops on the following vessels during the month: Steamships *Quabbin, Donald McKay, Sag Harbor, Trontolite, Heber, Ulysses, Jalapa, Caddo, Maricopa, La Habra, Langton*

Hall, Mina Brea, Artigas, Westboro, Azeus, Betsy Bell, Cuba, Steel Voyager; motorships *Cethana, Ansaldo San Giorgio II, Astoria;* U. S. S. *Kennedy, Glacier, Orion, Vulcan, Mugford, Ontario, Des Moines, Trinity, Tacoma, Contocook, Neches, Frederick, Dolphin, Carabasset*; U. S. submarines *S-7, R-24;* U. S. subchaser *No. 284;* barge *A-1;* tender *Perico;* and yacht *Genesee.*

The following vessels were dry-docked at Balboa during the month: U. S. S. *New Mexico;* Chilean battleship *Almirante Latorre;* steamships *Bahia Castillo, S. V. Harkness, Cuba,* and *Sussex;* motorship *Siam;* barges *A-1* and *No. 132;* tug *Mariner;* U. S. submarine *S-7;* U. S. subchaser *No. 284;* U. S. S. *Glacier;* and tender *Perico.*

The more important repair work carried out at the Cristobal shops consisted of the following: The steamship *Barima* was changed from a coal to an oil burner, and the boilers and oil pump repaired. The hull, frames, winches, and blower engines of the steamship *North American* were repaired. A new crank shaft for the ice machine on the U. S. S. *Shawmut* was made, staybolts renewed, and the motor boat repaired. The circulating pumps of the steamship *Bahia Castillo* were overhauled and the H. P. and L. P. crank brasses were adjusted. Repairs were made to the blower engine and copper pipes of the steamship *Ecremont Castle.*

In addition to the above, miscellaneous repairs were made to the following vessels: Steamships *Cartago, Urubamba, Achilles, Ulysses, Pacific, General W. C. Gorgas, Barima, San Juan, Cristobal, Ancon, Acajutla, Hector, Ardmore, Navarre, Wolverine State, Panama, Caribbean, Margaret Coughlan, Jamaica, Ionic, Balboa, Mantaro, Palena, Arzila, Quilpue, Matinicock, Guatemala, Parismina, Agron, Honduras, Hayden, Cauca, General H. F. Hodges, Tranquebar, Drake, Ebro, Reaper, Chipchung, City of Victoria, Crijnssen, Cartagena,* and *Toloa;* motorships *Siam, Laura C. Hall,* and *Chiquimula;* schooners *Anthony Nichols* and *Beulah;* U. S. S. *Sandpiper, Poe, Gannet, Mayes, Shawmut, Lagona,* and *Barbacoas II;* tug *Tavernilla, Porto Bello, Engineer* and supply *No. 1;* barges *Mamei* and *Darien;* wrecking barge *No. 91;* U. S. A. G. *Forse;* U. S. Mine Planter *Graham;* U. S. A. Jr. Mine Planter *1st Lt. Douglas;* Marine Division supply boat *No. 1;* Army transport *Buford;* launches *Corso, McKie, Capron, Hibiscus, Mary B, Rodman, Eunice, Azimuth, Patrol,* and *No. 2.*

The following vessels were dry-docked at Cristobal during the month: Steamships *Salvador* and *North American;* U. S. subchaser *No. 285;* dredge *No. 86,* Eagle *No. 32;* barge *No. 118;* tug *Ajax;* and launch *Putnam.*

The output of the Mechanical Division in patterns and castings, as compared with the preceding month, was as follows:

	December.			January.		
	Patterns.	Castings.	Pounds.	Patterns.	Castings.	Pounds.
Iron	36	1,471	68,933	34	862	45,934
Steel	14	870	93,943	28	1,476	63,600
Brass	49	1,842	15,929	28	2,505	14,851

A new air furnace was completed at the foundry of the Balboa shops. This has a capacity of 4,000 pounds. It is designed to facilitate the manufacture of large castings of high-grade bronze. Used in conjunction with facilities already existing, castings of 7,000 pounds weight can be produced. This will make single propeller blades as large as are found on any ship. The Balboa shops are now equipped to produce cast iron propellers, either solid or built-up, for any size of ship; solid steel wheels for everything except the largest ship, solid bronze wheels for smaller size ships, and built-up steel or bronze wheels for any size ship.

The routine inspection, hostling, and repair of equipment for the Panama Railroad Company was carried on during the month. The manufacture of 5 towing locomotives for the locks was begun. Twelve crews were instructed in the handling of locomotives, and 27 in oil and fuel economy during the month.

BUILDING CONSTRUCTION.

The following statement represents the degree of completion on January 31 of the more important work under construction by the Building Division:

	Per cent completed.
Silver townsite, Mount Hope:	
Twenty-seven 12-family married quarters	100
Fourteen 12-family married quarters	99
Four 12-family married quarters	95
Four 32-room bachelor quarters	[1] 99
Six 32-room bachelor quarters	[1] 95
Royal Mail Steam Packet Company's Office, Cristobal	79

[1] Indicates that no work was done during the month.

	Per cent completed.
Applying Specification roofing to Pier No. 6, Cristobal	80
Painting silver quarters, Gatun	95
Reroofing Cristobal bakery	[1] 85
Repairs to 35 houses, Cristobal	45
Construction of storehouse for Quarantine Officer, Cristobal	100
Manufacturing 250 chairs	100
Four hundred and sixty-eight kitchenettes for silver townsite, Cristobal	[1] 50
Roof between buildings 2 and 3, Balboa	55
Roof between buildings 3 and 4, Balboa	40
Moving type-18 house from Las Cascadas to Cristobal	30
Moving 2 type-14 houses from Las Cascadas to Balboa	90
All-America Cable Company's building, Cristobal	45
Manufacture of 300 wood rocking chairs	10

[1] Indicates that no work was done during the month.

Construction work for Army and Navy is separately reported.

DREDGING DIVISION.

Cucaracha Slide showed a general surface movement over nearly the entire area from January 1 to 22, inclusive. Since the latter date the entire slide has become quiescent. The dredge *Gamboa*, on a double-shift basis, worked in front of this slide within the basin, up to the 27th of the month, removing 102,900 cubic yards of material, and making a total of 2,336,400 cubic yards removed from this area since the slide of February 22, 1920. At the close of the month there was still some material within the basin to be removed to bring it to grade.

Culebra Slide has shown very little movement for the month, while the northern limit of the Barge Repair Slide was extended by the breaking off of the west bank between stations 1738-00 to 1736-50. This material has been removed from the channel since the 26th of the month. Hydraulic grader No. 1 was engaged in grading and ditching at East Culebra Slide during the entire month, removing an estimated total of 30,000 cubic yards of material from this area. Hydraulic grader No. 3 was employed the entire month at Cucaracha Slide, and it is estimated that 40,000 cubic yards of earth and rock were sluiced from this area.

The total excavation for January including earth, rock, and run-of-bank gravel, was 507,060 cubic yards, as follows:

Cubic yards.	Classified as— Earth.	Rock.	Character of work.	Stations.	Equipment
				Gaillard Cu (Cucaracha).	
[1] 102,900	10,300	92,600	Maintenance	1905–00 to 1817–00 E	*Gamboa.*
				Gaillard Cut (Barge Repair).	
[1] 16,400	4,100	12,300	Maintenance	1736–50 to 1750–50 W	*Gamboa.*
				Miraflores Lake.	
[2] 150,000	150,000	.....	Maintenance	1989–00 to 1966–00 W 1976–00 to 1969–00 C. L.	*No. 83.*
				Pacific entrance.	
[3] 18,100	15,600	2,500	Maintenance	2284–50 to 2292–60 W	*Cascadas.*
				Balboa inner harbor (oil berth).	
[4] 24,500	8,900	15,600	Construction	2281–00 to 2286–00	*Cascadas.*
				Balboa inner harbor.	
[4] 11,500	8,500	3,000	Construction	Front of Dock No. 7	*Cascadas.*
				Chagres River gravel.	
[5] 33,100	33,100	.....	Aux. construction	Service	*Marmot.*
[5] 460	460	.....	Aux. construction	Service	*Marmot.*
				Atlantic entrance.	
[6] 150,100	150,100	.....	Maintenance	332–00 to 366–00 W	*No. 85.*
507,060	381,060	126,000			

[1] Gaillard Cut. [2] Miraflores Lake. [3] Pacific entrance. [4] Balboa inner harbor. [5] Chagres River. [6] Atlantic entrance.

The material excavated at the various stations was disposed of as follows:

	Cubic yards.
West side of channel at Mindi	150,100
North of Gamboa	117,800
West side of prism, Miraflores Lake	150,000
Sea dumps, Pacific entrance	54,100
Deep water, Chagres River	33,100
North of Gold Hill	1,500
Towed to Gamboa	460
Total	507,060

On February 1, 1921, the following excavation remained to be done:

Location.	Earth.	Rock.	Total.
	Cu. yds	*Cu. yds.*	*Cu. yds.*
Gaillard Cut	.....	25,000	25,000
Pacific entrance	47,000	80,900	127,900
Total, Canal prism	47,000	105,900	152,900
Balboa inner harbor	75,450	8,000	83,450
Total, ocean to ocean	139,850	116,900	256,750

MUNICIPAL ENGINEERING DIVISION.

The total output of all pumping stations for the month of January was 863,708,750 gallons; and that of the 3 filtration plants 538,978,000 gallons. The consumption of water in Panama City was 93,624,000 gallons, and that for Colon 59,478,550 gallons. Sales of water to 350 vessels totaled 19,156,147 gallons.

Construction work, as itemized below, was under progress during the month, with completion on January 31, as shown:

Northern District.

	Per cent completed.
Municipal work, New Cristobal townsite:	
Grading	55
Roads	97.5
Water lines	72
Sidewalks	86
Sanitary sewers	75
Municipal work, block No. 3, Cristobal	50
Installation of 12-inch oil line to Dock 14	70
Laying of two 12-inch oil lines to Pier 6	10
Laying of 6-inch Diesel oil line to Dock 6	15
Water and sewer connections for 2 type-17 houses	100

Southern District.

Municipal work for 4 type-14 houses, Quarry Heights	[1] 95
Storm sewer, Javillo Fill	[1] 99
Sewer, Northern Avenue to beach	100
Box sewer, Panama Railroad yards	[1] 99
Concreting streets, new Santo Tomas Hospital	[1] 98
Municipal work for 3 type-18 houses, Balboa	[1] 60
Reconstruction of road, Quarry Heights	[1] 95
Water and sewer connections to Shrine Building, Quarry Heights	[1] 91
Box sewer on 13th Street, Panama	[1] 99
Reconstruction of road to Paraiso store	100
New wash-water tank, Miraflores	95
Road from La Boca to oil-handling plant	100
Construction of 12-inch storm sewer, Balboa clubhouse	100
Construction of concrete sea wall, new Santo Tomas Hospital	5
Construction of 10-inch sewer on 22d Street, Panama City	10
Asphalting east 19th Street, Guachapali	100

[1] Indicates that no work was performed during the month.

Construction work for the Army and Navy is separately reported.

OCCUPATION OF QUARTERS.

Occupants of Panama Canal and Panama Railroad quarters on January 31, were classified as follows:

	Men.	Women.	Children.	Total.
Americans	3,475	2,269	2,665	8,409
Europeans	159	38	83	280
West Indians	4,879	2,193	4,431	11,503
Totals	8,513	4,500	7,179	20,192

WORKING FORCE.

(*Effective January 15, 1921.*)

Department or Division.	Gold.	Silver.	Total.
Operation and Maintenance:			
Office	30	45	75
Building Division	156	436	592
Electrical	218	261	479
Municipal Engineering	99	915	1,014
Lock Operation	178	609	787
Dredging	184	1,154	1,338
Mechanical	962	1,760	2,722
Marine	204	556	760
Fortifications	73	400	473
Totals	2,104	6,136	8,240

WORKING FORCE—continued.

Department or Division.	Gold.	Silver.	Total.
Supply Department:			
Quartermaster	225	1,630	1,855
Subsistence	33	421	454
Commissary	289	1,465	1,754
Cattle Industry—Plantations	23	413	436
Hotel Washington	9	93	102
Totals	579	4,022	4,601
Accounting	245	10	255
Health	245	880	1,125
Executive	569	254	823
Panama Railroad:			
Superintendent	69	517	586
Transportation	124	160	284
Receiving and Forwarding Agency	83	1,440	1,523
Coaling Stations	127	1,405	1,532
Totals	403	3,522	3,925
Grand total	4,145	14,824	18,969

VITAL STATISTICS.

A total of 147 deaths occurred during the month of January from the population comprising the Canal Zone and the cities of Panama and Colon. Of the above deaths, 58, or 39 per cent, occurred among children under 5 years of age. Tuberculosis, diarrhea and enteritis, and pneumonia, were the leading causes of mortality in the order named. Ninety-three cases of malaria were reported, with 1 death. Dysentery caused 4 deaths, 2 of which were among nonresidents of the Isthmus. Of the total deaths, 8 were due to external causes.

Three hundred and fifty-nine births were reported during the month, 21 of which were stillbirths. Deaths among children under 1 year of age numbered 40, giving an infant mortality rate, based on the number of births reported for the month, of 118.3 per thousand.

Forty-three cases of smallpox were admitted to Ancon Hospital during the month, of which all but 1 originated in Colon. The remaining case was a resident of Panama City, transferred from Santo Tomas Hospital. There have been no deaths from these cases to date.

RECEIPTS AND SALES OF MATERIALS AND SUPPLIES.

The total value of the material ordered on United States requisitions and received on the Isthmus during the month of January was $988,080.34. Of this material, $959,774.78 was chargeable to Operation and Maintenance, $15,677.89 to Construction and Equipment, and $12,627.67 to miscellaneous departments.

The total cash sales on the Isthmus from storehouses and obsolete stores amounted to $99,079.44, of which $56,469.14 was for stock, $38,985.87 for fuel oil, $464.68 for scrap, and $3,159.75 for obsolete and second-hand material.

Sales to steamships from storehouses amounted to $54,721.21, of which $17,875.15 was for fuel oil, and $36,846.06 for miscellaneous stock items. Total sales of commissary supplies to all purchasers amounted to $963,341.09, made up as follows: To steamships other than United States Government vessels and those of the Panama Railroad Steamship Line, $100,801.72; to The Panama Canal, $136,986.97; to the United States Government, including the Army and Navy, $177,730.37; to individuals and companies, mainly through charge accounts at the retail commissaries, $24,340.51; to the Panama Railroad, including its steamships and the Hotel Washington, $31,985.67; and to individuals purchasing coupons, $491,495.85.

FINANCIAL RECEIPTS AND EXPENDITURES.

The cash balance in Canal appropriations on January 31, exclusive of fortifications, was $13,424,285.71. The balance in fortification funds allotted to The Panama Canal for expenditure was $489,653.91. Payments from appropriations made by the Disbursing Clerk, Washington, amounted to $1,103,379.34, and by the Paymaster on the Isthmus, to $1,678,098.54. Purchases of commissary books from the Panama Railroad Company amounted to $403,983.27. The total Canal collections on the Isthmus amounted to $2,789,924.49, classified as follows:

Repaid to appropriations	$1,250,116.95
Commissary	406,265.88
Tolls	1,094,327.76
Water rentals, Panama and Colon	15,100.95
Postal receipts	13,080.69
Licenses, taxes, court fees, fines, etc	9,972.26
Total	$2,789,924.49

Collections by the Disbursing Clerk, Washington, amounted to $248,636.05. Deposits of $59,800 were made with the Assistant Treasurer of the United States to be applied on payment of tolls and other charges against vessels using the Canal. Receipts from Canal Zone and miscellaneous funds amounted to $247,219.51; disbursements from the same source were $54,363.32.

January payrolls on the Isthmus aggregated $1,304,040.31, as compared with $1,305,117.05 for the preceding month, and $1,275,004.90 for the corresponding month 1 year ago.

Respectfully,

JAY J. MORROW,
Acting Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending March 5, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Manavi	Pacific Steam Navigation Co		February 28		93
Gen. G. W. Goethals	Panama Railroad Steamship Line		March 1		1,723
Balboa	Colombian Maritime Co		March 1,		140
Oropesa	Pacific Steam Navigation Co	February 28	March 1	1	(1)
Ageroen	Caribbean Steamship Co	February 28	March 1	237½	230
Cristobal	Panama Railroad Steamship Line	February 28	March 2	9,636	(1)
Acajutla	Pacific Steam Navigation Co	February 28	March 3	321	90
Ancon	Panama Railroad Steamship Line	February 28	March 3	10,100	(1)
Heredia	United Fruit Co	February 28	March 3	966	132
Corcovado	Pacific Steam Navigation Co	March 1	March 2	36	(1)
Governor	Harrison Line	March 1	March 2	458	3
Ardover	Royal Netherlands W. I. Mail	March 2	March 3	201	(1)
Cauca	Pacific Steam Navigation Co	March 2		229¼	
Carrillo	United Fruit Co	March 2	March 3	551	304
Nuuanu	Venancio Concepcion	March 2	March 5	115	(1)
Santa Marta	United Fruit Co	March 3	March 3	44	5
San Jose	Pacific Mail Steamship Line	March 3		769	
Orcoma	Pacific Steam Navigation Co	March 3	March 4	246	(1)
Van Rensellaer	Royal Netherlands W. I. Mail	March 3	March 5	26	580
Toloa	United Fruit Co	March 4	March 5	9	21
Essequibo	Pacific Steam Navigation Co	March 4	March 5	94	(1)
Mantaro	Peruvian Steamship Co	March 4		3,227	
Coronado	Elders & Fyffes, Ltd	March 5	March 5	72	(1)

[1] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending March 5, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Acajutla	Pacific Steam Navigation Co	February 27	February 28	2	3
Laura C. Hall	Pacific Metals Corporation	February 27	March 3	3	51
Balboa	Colombian Maritime Co	March 1	March 1		19
Nuuana	Venancio Concepcion	March 1	March 2	589	
Cauca	Pacific Steam Navigation Co	March 2	March 2	1	
San Jose	Pacific Mail Steamship Co	March 2	March 3	64	
Essequibo	Pacific Steam Navigation Co	March 5	March 5	133	
Aysen	Compañia Sud Americana de Vap	March 5		113	
Kaweah	United States Shipping Board	March 5		9,644	

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Distribution of cargo passing through the Canal from the Pacific to Atlantic, January, 1921.[a]

From—	North America. United States. North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States	West coast of Canada.	West Indies.	Atlantic terminus, Panama Canal.	Total, North America.	Europe. Belgium.	British Isles.	Denmark.	France.	Germany.	Holland.	Italy.	Spain.	Sweden.	Europe.	Total, Europe.	Azores.[a]	Grand total.	Per cent of total cargo
West Coast of South America:																						
Chile	18,073	42,098	12,635	72,806	.....	16,653	356	89,815	3,003	32,613	5,338	16,012	9,294	15,683	6,545	9,887	....	14,241	112,616	12,100	214,531	34.6
Colombia	89	.....	.....	89	.....	.....	943	1,032	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,032	0.1
Ecuador	2,915	.....	.....	2,915	.....	.....	697	3,612	.....	2	.....	62	155	.....	425	.....	.....	.....	644	.....	5,199	0.8
Peru	5,678	.....	.....	5,678	8,463	.....	3,545	17,686	6	30,798	.....	25	.....	.....	.....	.....	.....	.....	30,829	.....	48,515	7.8
Total, South America	26,755	42,098	12,635	81,488	8,463	16,653	5,541	112,145	3,009	63,413	5,338	16,099	9,449	15,683	6,970	9,887	....	14,241	144,089	12,100	268,334	43.3
West Coast of North America:																						
West coast of United States	75,358	150	2,700	78,208	.....	3,128	367	81,703	2	38,676	1,455	16,980	26,867	569	15,484	.....	139	12,168	112,340	.....	194,143	31.3
West coast of Canada	3,221	.....	.....	3,221	.....	.....	.....	3,221	.....	19,960	.....	.....	.....	.....	200	.....	.....	.....	20,160	.....	23,381	3.0
West coast of Central America	589	.....	.....	589	.....	.....	973	1,562	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,562	0.2
Total, North America	79,168	150	2,700	82,018	.....	3,128	1,340	86,486	2	58,636	1,455	16,980	26,867	569	15,684	.....	139	12,168	132,500	.....	218,986	35.3
Asia:																						
China	9,932	.....	.....	9,932	.....	1,500	.....	11,432	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11,432	1.8
Japan	2,190	.....	.....	2,190	.....	.....	.....	2,190	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,190	0.3
Malay Peninsula	1,373	.....	.....	1,373	.....	.....	.....	1,373	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,373	0.2
Philippines	3,112	.....	.....	3,112	.....	.....	.....	3,112	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,112	0.5
Far East	3,711	.....	.....	3,711	.....	.....	.....	3,711	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,711	0.6
Total, Asia	20,318	.....	.....	20,318	.....	1,500	.....	21,818	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21,818	3.4
Australasia:																						
Australia	15,575	.....	.....	15,575	.....	.....	.....	15,575	.....	22,947	.....	.....	.....	.....	.....	.....	.....	.....	22,947	.....	38,522	6.3
New Zealand	.....	.....	.....	.....	.....	.....	.....	.....	.....	60,579	.....	.....	.....	.....	.....	.....	.....	.....	60,579	.....	60,579	9.8
Australasia	6,824	.....	.....	6,824	.....	.....	.....	6,824	.....	4,832	.....	.....	.....	.....	.....	.....	.....	.....	4,832	.....	11,656	1.9
Total, Australasia	22,399	.....	.....	22,399	.....	.....	.....	22,399	.....	88,358	.....	.....	.....	.....	.....	.....	.....	.....	88,358	.....	110,757	18.0
Grand totals	148,640	42,248	15,335	206,223	8,463	21,281	6,881	242,848	3,011	210,407	6,793	33,079	36,316	16,252	22,654	9,887	139	26,409	364,947	12,100	619,895	100.0
Per cent of total cargo	23.9	6.8	2.5	33.2	1.3	3.4	1.3	39.2	0.4	33.8	1.8	5.2	5.7	2.6	3.6	1.5	....	4.2	58.9	1.9	100.0	.....
Per cent of total cargo last month	25.1	10.7	3.3	39.1	.....	1.8	4.3	45.2	6.7	30.3	1.9	3.9	2.7	.....	.....	2.0	1.3	0.5	50.6	4.2	.....	.....

[a] By tons of 2,240 pounds.

[a] For orders.

Distribution of cargo through the Panama Canal from the Atlantic to the Pacific, January, 1921.[1]

From—	South America.						North America.						Asia.					Australasia.					
	Chile.	Colombia.	Ecuador.	Peru.	West coast, South America.	Total, South America.	West coast, United States.	West coast, Canada.	West coast, Central America.	Pacific terminus, Panama Canal.	West coast, North America.	Total, North America.	China.	Japan.	Philippine Islands.	Far East.	Total, Asia.	Australia.	New Zealand.	Australasia.	Total, Australasia.	Grand total.	Per cent of total cargo.
North America:																							
North Atlantic ports	45,672	1,192	3,577	3,576	7,045	61,062	53,494	12	.....	11,998	8,338	73,842	16,100	20,020	6,912	5,820	48,852	18,219	25,985	6,079	50,283	234,039	42.1
South Atlantic ports	24,809	.....	.....	4,773	.....	29,582	944	.....	98	.....	.....	1,042	390	2,488	.....	.....	2,878	797	26,161	.....	26,958	60,460	10.9
Gulf ports	.....	.....	5	3,917	751	4,673	12,726	.....	.....	.....	.....	12,726	21,601	6,929	.....	8,900	37,430	6,200	.....	.....	6,200	61,029	10.8
Total, United States	70,481	1,192	3,582	12,266	7,796	95,317	67,164	12	98	11,998	8,338	87,610	38,091	29,437	6,912	14,720	89,160	25,216	52,146	6,079	83,441	355,528	63.8
West Indies	2,500	.....	.....	.....	.....	2,500	41	5,050	.....	.....	.....	5,091	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,591	1.4
Atlantic Terminus, Panama Canal	4,203	745	312	1,971	1,149	8,380	12,111	.....	2,797	.....	.....	14,908	.....	.....	.....	.....	.....	.....	.....	.....	.....	23,288	4.2
East coast, Mexico	61,930	.....	.....	.....	.....	61,930	20,000	.....	.....	19,900	.....	39,900	.....	.....	.....	.....	.....	.....	.....	.....	.....	101,830	18.2
Total, North America	139,114	1,937	3,894	14,237	8,945	168,127	99,316	5,062	2,895	31,898	8,338	147,509	38,091	29,437	6,912	14,720	89,160	25,216	52,146	6,079	83,441	488,237	87.6
Europe:																							
Belgium	.....	.....	.....	.....	.....	.....	9,703	.....	.....	.....	.....	9,703	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,703	1.8
British Isles	9,276	.....	.....	5,088	.....	14,364	869	449	.....	.....	2,523	3,841	.....	.....	.....	.....	.....	.....	21,495	.....	21,495	39,700	7.1
Denmark	.....	.....	.....	.....	.....	.....	508	.....	.....	.....	.....	508	.....	.....	.....	.....	.....	.....	.....	.....	.....	508	0.1
Germany	186	.....	.....	100	3,130	3,416	36	.....	.....	.....	.....	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,452	0.6
Holland	.....	.....	.....	10	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....
Italy	.....	.....	.....	80	630	710	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	710	0.1
Norway	.....	.....	.....	.....	.....	.....	688	.....	.....	.....	.....	688	.....	.....	.....	.....	.....	.....	.....	.....	.....	688	0.1
Spain	.....	.....	.....	.....	240	240	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	240	.....
Sweden	44	.....	45	.....	.....	89	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	89	.....
Europe	6,191	.....	173	.....	3,106	9,470	555	.....	.....	.....	1,429	1,984	.....	.....	.....	.....	.....	.....	.....	.....	.....	11,454	2.1
Total, Europe	15,697	.....	218	5,278	7,106	28,299	12,359	449	.....	.....	3,952	16,760	.....	.....	.....	.....	.....	.....	21,495	.....	21,495	66,554	11.9
East coast, South America	.....	.....	.....	.....	.....	.....	2,367	.....	.....	.....	.....	2,367	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,367	0.5
Grand total	154,811	1,937	4,112	19,515	16,051	196,426	114,042	5,511	2,895	31,898	12,290	166,636	38,091	29,437	6,912	14,720	89,160	25,216	73,641	6,079	104,936	557,158	100.0
Per cent of total cargo	27.6	0.4	0.8	3.5	2.9	35.2	20.5	0.9	0.5	5.8	2.2	29.9	6.8	5.3	1.2	2.7	16.0	4.6	13.2	1.1	18.9	100.0	.....
Per cent of total cargo last month	35.7	0.3	0.2	3.8	4.8	44.8	12.1	0.1	1.2	....	0.4	17.6	5.9	6.5	2.9	8.6	24.1	.....	7.5	6.0	13.5	.....	.....

[1] By tons of 2,240 pounds.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, March 5, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Manavi	22	17.50	28	6.20	28	13.00	28	15.15	British	Pacific Steam Navigation Co.	216.0	35.0	11.1	Cristobal	Guayaquil	General	92	1,357	884
Charlton Hall	28	5.15	28	11.02	28	18.55	28	19.53	American	Isthmian Steamship Line	400.0	50.0	25.1	New York	Coronel	Steel	6,546	5,696	4,267
Canadian Importer	28	13.17	28	13.30	28	20.35	28	22.25	British	Canadian Government	400.0	52.0	21.0	St. Johns	Auckland	General	3,000	5,855	4,151
Wytheville	28	15.52	1	6.10	1	13.53	1	15.17	American	Barber Line (S. B.)	395.5	55.0	25.6	New York	Manila	General	6,609	6,841	4,758
Port Sydney	28	14.11	1	6.20	1	15.47	1	17.07	British	Commonwealth and Dom. Line	501.0	63.0	28.6	New York	Auckland	General, mach.	8,710	11,857	8,947
Balboa	24	22.52	1	6.46	1	15.15	1	23.40	American	Colombian Maritime Co.	190.0	29.1	12.6	Cristobal	Guayaquil	General	134½	741	350
Utique	24	16.28	1	10 15	1	17.29	6	17.00	French	Societe Annonime de Peche	232.0	44.0	17.0	Bordeaux	San Francisco	Iron	1,000	1,747	1,028
Morristown	25	19.46	1	12.37	1	20.35	2	18.20	American	U. S. A. A. Line (S. B.)	377.0	52.0	23.9	New York	Sydney	General	5,262	5,205	3,743
Mahana	28	18.40	1	12.49	1	20.30	2	0.05	British	Shaw, Saville, & Albion Co.	520.9	63.0	28.6	London	Auckland	General	6,951	12,151	8,727
S. C. 285			1	6.24	1	17.28	2		American	United States Navy				Cristobal	Balboa				
Santa Luisa	1	19.53	2	6.03	2	12.36	2	13.36	American	W. R. Grace & Co.	360.2	51.6	25.0	New York	Valparaiso	General	4,053	5,694	3,975
Corcovado	1	17.28	2	5.20	2	14.17	2	15.20	British	Pacific Steam Navigation Co.	390.0	47.0	21.3	Hamburg	Valparaiso	General	3,592	4,976	3,284
Portsaid Maru	2	6.50	2	7.45	2	15.25	2	16.40	Japanese	Kawaski Kisen Kabushiki Kaisha	385.0	51.0	23.0	New York	Seattle	General, cottton.	4,917	5,914	4,399
Miye Maru	2	7.20	2	11.20	2	18.25	2	22.25	Japanese	Suzuki Steamship Co.	305.0	43.7	22.0	Nuevitas	San Francisco	Sugar	3,720	3,179	2,180
Lock City [1]					2	9.20	2	11.00	American	W. C. Hyler	30.2	8.4	3.0	Gatun Lake	Balboa			9	7
Kent	2	16.19	3	6.19	3	14.17	3	15.20	British	Federal Steam Navigation Co.	480.0	62.9	27.9	New York	Auckland	General	8,100	10,507	8,132
Ardover	2	6.33	3	6.31	3	15.10	3	16.00	British	Daniel Steamship Co.	483.5	62.8	21.3	Hamburg	Valparaiso	General	2,900	9,615	6,525
Piako	2	18.54	3	7.47	3	15.40	3	16.45	British	New Zealand Shipping Co.	450.0	58.0	29.7	Liverpool	Auckland	General	7,000	8,459	6,060
West Camak	2	23.20	3	8.04	3	17.22	3	18.25	American	E. C. Evans & Sons (S. B.)	410.5	54.2	20.0	Liverpool	San Francisco	General	3,025	6,622	4,880
Orcoma	3	12.05	4	10.00	4	17.29	4	18.32	British	Pacific Steam Navigation Co.	511.0	62.0	26.2	Liverpool	Coronel	General	2,782	12,267	7,942
Chas. H. Cramp	4	15.50	5	6.13	5	12.51	5	14.40	American	Atl. Gulf & Pac. S. S. Corp. (S. B.)	404.0	54.0	18.0	Savannah	Los Angeles	General	2,290	6,755	4,688
Nuuanu	2	20.13	5	6.14	5	16.22	5	17.40	American	V. Concepcion	203.2	34.0	9.6	Cristobal	San Francisco	Ballast		1,088	809
Essequibo	4	7.41	5	6.15	5	13.46	5	15.00	British	Pacific Steam Navigation Co.	450.0	57.0	23.9	New York	Valparaiso	General	1,699	9,037	6,089
Cape Henry	4	14.13	5	6.23	5	15.49	5	16.47	American	Atl. Gulf and Pacific S. S. Corp.	391.0	52.0	23.1	Brooklyn	Seattle	General	4,650	5,146	3,557
Erroll	4	22.22	5	8.45	5	16.39	5	17.45	British	Australian Steamship Co.	365.0	47.5	24.0	Newport News	Port Chalmers	Coal	4,344	4,714	3,401
J. W. McKie [1]			5	6.00	5	8.16			American	United States Army				Cristobal	Gatun				
Kaweah	5	10.20	5	10 47	5	18.10			American	McAlister Brothers (S. B.)	430.0	58.2	28.0	New Orleans	Balboa	Fuel oil	9.448	7.680	5.664

[1] Launch.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Santa Barbara	26	15.20	27	6.28	27	14.43	27	15.30	American	W. R. Grace & Co.	404.6	53.9	27.0	Valparaiso	Norfolk	Nitrate of soda	8,629	6,789	4,746
Mineola	26	14.45	27	6.54	27	14.46	27	15.00	American	W. R. Grace & Co.	298.6	40.0	17.0	Salaverry	New York	Sugar and cocoa	1,607	2,835	1,822
Gargoyle	27	11.50	27	13.40	27	20.33	27	20.33	American	Vacuum Oil Co.	425.8	57.0	22.0	San Francisco	Texas City	Ballast			
Acajutla	27	13.40	28	6.36	28	17.50	3	7.15	British	Pacific Steam Navigation Co.	215.7	33.5	12.6	Tumaco	Cristobal	(2)	356	1,273	706
Nile	27	17.30	28	6.49	28	17.55	28	17.55	American	Pacific Steamship Co. (S. B.)	410.0	54.2	27.1	Portland	Manchester	Wheat	7,530	7,495	5,635
Oropesa	27	18.10	28	7.40	28	19.55	1	8.45	British	Pacific Steam Navigation Co.	530.0	66.3	28.0	Valparaiso	Liverpool	General	7,600	14,510	10,259

[2] Cocoa, coffee, and hides.

Iris	2-28	9.55	2-28	10.35	2-28	20.07	1	7.05	American	Pacific Transport Co	304.3	38.8	20.0	San Francisco	New Orleans	General	2,128	3,030	2,021
Magdala	1	1.20	1	7.44	1	17.37	1	20.08	Danish	Orient Steamship Co	358.9	51.9	24.4	Valparaiso	Savannah	Nitrate of soda	6,597	4,649	3,354
Orari	1	14.45	2	6.44	2	15.58	2	15.58	British	New Zealand Shipping Co	460.7	60.2	28.0	Wellington	London	Frozen, general	15,000	9,827	6,895
Swift Arrow	2-28	15.30	2	7.03	2	15.08	3	11.45	American	Swiftsure Oil Co	464.6	60.2	21.0	San Francisco	Tampico	Ballast			
S. C. 285	1	17.28	2	7.20	2	19.35			American	United States Navy	110.0	16.0		Balboa	Cristobal				
Otaki	2	5.00	2	8.47	2	16.47	2	16.47	British	New Zealand Shipping Co	449.1	58.2	21.6	Napier	Boston	General	2,000	8,256	5,470
Cauca	2	6.45	2	9.36	2	17.47			British	Pacific Steam Navigation Co	246.0	35.2	12.6	Guayaquil	Cristobal	(2)	230¼	1,582	1,023
Nunanu	1	9.35	2	10.41	2	20.13	5	6.14	American	Venancio-Concepcion	203.2	34.0	18.6	San Francisco	Cristobal	Gasoline	(5)		
Caddo	2-13	8.15	2	14.55	2	21.52	3	6.28	American	Standard Oil Co. of N. J.	414.5	55.2	18.0	Taltal	Tampico	Ballast		6,438	4,391
San Jose	2	9.45	3	6.36	3	13.40			American	Pacific Mail Steamship Co	283.0	37.0	16.0	San Francisco	Cristobal	General	833	2,352	1,602
Santa Ana	3	1.45	3	8.03	3	15.04	3	16.00	American	W. R. Grace & Co	360.2	51.6	23.6	Valparaiso	New York	(4)	3,630	5,776	4,081
Benjamin Brewster	2	22.10	3	8.48	3	15.45	4	5.25	American	Standard Oil Co. of N. J.	411.6	53.4	22.0	Caleta Buena	Tampico	Ballast		6,360	4,337
Coalinga	3	5.00	3	9.13	3	16.44	3	18.30	American	Union Oil Co	471.0	55.0	19.5	Los Angeles	Port Lobos	Ballast		8,101	5,627
Waban	3	20.45	4	7.10	4	14.30	4	23.40	American	Struthers & Dixon (S. B.)	401.4	53.2	25.0	Vancouver	Immingham	Railroad ties	(6)		
Bradford	3	15.30	4	7.40	4	15.57	4	15.57	American	Standard Oil Co	426.8	54.5	18.6	Sao Francisco	Tampico	Ballast		7,318	5,458
Texan	3	18.00	4	7.47	4	16.48	4	16.48	American	American-Hawaiian Line	471.0	57.2	23.0	Seattle	Philadelphia	General	5,365	9,154	7,033
Belridge	4	3.15	4	8.28	4	17.37	4	19.11	Norwegian	W. Wilhelmsen	425.0	57.0	20.0	Tocopilla	Tampico	Ballast		7,065	5,095
Mantaro	4	6.00	4	8.41	4	18.40			Peruvian	Peruvian Steamship Co	354.0	46.4	21.6	Callao	Cristobal	General	7,303	4,838	2,959
Minnequa	4	6.30	4	14.19	4	22.22	4	22.23	American	Wessel Duval (S. B.)	390.0	54.2	25.0	Caleta Buena	Charleston	Nitrate	7,500	6,106	4,355
Terrier	4	17.30	5	6.32	5	15.49	5	20.50	Norwegian	W. Wilhelmsen	400.0	52.0	24.0	Mejillones	New Orleans	Nitrate	8,250	5,531	3,979
Rovuma	4	13.30	5	6.52	5	15.10	5	20.25	French	French Government	432.9	56.0	27.0	Valparaiso	Cristobal [3]	Nitrate	7,500	7,484	5,408
H. M. Flagler	4	20.45	5	7.49	5	16.14	5	20.08	American	Standard Oil Co. of N. J.	461.6	60.0	21.0	Iquique	Tampico	Ballast		8,606	6,525
Erle	5	1.30	5	8.29	5	17.45	5	20.44	Norwegian	Arenzi Rederi	400.0	53.0	28.0	Taltal	Azores	Nitrate	8,024	6,207	4,501
City of Vancouver	5	6.00	5	8.54	5	18.20	6	2.38	British	British-Canadian Steamship Co	411.5	54.1	23.6	Portland	Emden	Wheat	7,540	6,614	4,995

[3] For orders. [4] Nitrate, copper, glue, iodine, beans, lentils, peas, honey, beeswax, hides, and general. [5] 428,024 gallons. [6] 4,434,731 feet B. M.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Feb. 27	Metapan	United Fruit Co	New Orleans and way-ports.
Feb. 28	Ageroen	Hensen Tengene Co	New York.
Feb. 28	Cristobal	Panama Railroad Steamship Line	Norfolk.
Feb. 28	Ancon	Panama Railroad Steamship Line	Norfolk.
Feb. 28	Heredia	United Fruit Co	New Orleans.
March 1	Governor	Harrison Line	Liverpool via wayports.
March 2	Carrillo	United Fruit Co	New York via Kingston.
March 3	Santa Marta	United Fruit Co	Colombian ports.
March 3	Van Renselaer	Royal Netherlands W. I. Mail	Amsterdam and way-ports.
March 4	Toloa	United Fruit Co	New York via wayports.
March 4	Megantic	White Star Line	New York and wayports.
March 5	Coronado	Elders & Fyffes Line	Port Limon.
March 5	Turrialba	United Fruit Co	New Orleans and way-ports.

DEPARTURES.

Date.	Vessel.	Line.	For—
March 1	Ageroen	Hensen Tengene Co	Guantanamo.
March 1	Santa Leonora	United States Army	San Juan.
March 1	Gen. G. W. Goethals	Panama Railroad Steamship Line	New York via Haiti.
March 1	Metapan	United Fruit Co	Port Limon.
March 2	Cristobal	Panama Railroad Steamship Line	Norfolk.
March 2	Governor	Harrison Line	Tampico.
March 3	Ancon	Panama Railroad Steamship Line	Norfolk.
March 3	Carrillo	United Fruit Co	New York via wayports.
March 3	Santa Marta	United Fruit Co	New York via Kingston.
March 3	Heredia	United Fruit Co	New Orleans and way-ports.
March 4	Megantic	White Star Line	La Guaira.
March 5	Toloa	United Fruit Co	New York via Port Limon and Habana.
March 5	Van Renselaer	Royal Netherlands W. I. Mail	Puerto Colombia.
March 5	Coronado	Elders & Fyffes Line	Kingston.

(Continued on page 455, column 2.)

Sailing of the Sussex.

The steamship *Sussex*, which came out of the dry dock at Balboa on February 21, after receiving repairs made necessary by her running on the West Breakwater in Limon Bay on January 3, completed the reloading of her cargo at Pier 18, Balboa, on March 8, and proceeded to the coaling plant to take bunkers for the voyage to New Zealand ports. Coaling was finished in the morning of March 9, and the *Sussex* was ready to sail at the time of going to press.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended March 5:

Steamship *Steel Inventor*, repairs to hull; launch *Vacuum, Jr.*, general repairs; steamship *Utique*, boiler repairs; U. S. S. *Buchanan*, repairs to main engine; tender *Perico*, docking, staging, cleaning, painting, and miscellaneous repairs; U. S. S. *Mason*, renew starboard propeller guard; launch *Pilot*, general repairs; barges *Nos. 132* and *138*, general repairs; steamship *Caribbean*, general repairs; submarines *O–11* and *O–16*, periodical overhaul; steamships *Caddo*, heavy repairs; *Morristown*, repairs to main engine; motor schooner *Laura C. Hall*, repairs to starboard engine; barge *No. 135*, general repairs; steamships *Swift Arrow*, miscellaneous hull and engineering work; *Sussex*, heavy accident repairs and docking, cleaning, and painting; motorship *Coolcha*, miscellaneous engine and pipe repairs; U. S. S. *Satterlee*, miscellaneous C. and R. and engineering repairs; U. S. S. *Birmingham*, crane service; U. S. S. *Aaron Ward*, miscellaneous engineering work; steamship *Rovuma*, install 2 closed chocks, aft.

The following vessels were at the Cristobal shops for repairs during the week ended March 7:

Steamship *Ulysses*, barge *Mamei*, steamships *Panama*, *Achilles*, barge *Darien*, steamship *Cristobal*, miscellaneous repairs and painting to engine, deck, and steward departments; U. S. Eagle *No. 31*, install ballast, clean and paint hull; launch *Sarita*, miscellaneous repairs, paint hull above waterline and superstructure; steamships *Jamaica*, repair beams under boilers, repair auxiliary steam pump, etc.; *Mantaro*, plane valve face, bore out valve chest, fit rings to shuttle valve of auxiliary pump, etc.; *Essequibo*, drill holes, manufacture and install stud in gear of mooring winch; schooner *Anthony Nichols*, repair keel, scrape bottom, etc.; steamship *Ardover*, manufacture one copper pipe, anneal pipe, furnish rubber gaskets, etc.; yacht *Maraya*, repair gasoline engine, generator set, and rudder; tug *Favorite*, calk seams on both boilers, weld circulating engine column and other repairs in connection with same; steamships *Parismina*, *Arawa*, *City of Vancouver*, *Chili*, *San Jose*, *Benjamin Brewster*, schooner *Nuuanu*, steamships *Caddo*, *Salvador*, and *Swift Arrow*, miscellaneous minor repairs.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies, including the 25 per cent surcharge, effective March 1, 1921:

Commodities.	Unit.	Price.
Brass, bar	Lb.	$0.44
Brass, sheet	Lb.	.75
Bronze, Tobin	Lb.	.375
Cement, at Panama:		
Including surcharge	Bag	2.07
Credit for empty bag returned	Bag	.25
Cement, at Colon:		
Including bag and surcharge	Bag	1.95
Credit for empty bag returned	Bag	.25
Charcoal	Cwt.	1.63
Copper, bar	Lb.	.44
Gasoline, motor grade, in drums	Gal.	.56
Lead, sheet	Lb.	.17
Lead, pig	Lb.	.125
Lumber, yellow pine or fir, except ceiling	M ft. B. M.	93.75
Lumber, ceiling, siding, and flooring, 1" x 6"	M ft. B. M.	118.75
Lumber, flooring, 1" x 3" and 1" x 4"	M ft. B. M.	143.75

Lumber, native, prices per 1,000 feet board measure:

Kind.	Rough.		Dressed.	
	Green.	Kilned.	Green.	Kilned.
Almendra	$106.25	$118.75	$115.00	$127.50
Alcavu	87.50	100.00	96.25	108.75
Alcareto	106.25	118.75	115.00	127.50
Amargo	106.25	118.75	115.00	127.50
Bateo	62.50	75.00	71.25	83.75
Cedro Amargo	106.25	118.75	115.00	127.50
Caoba Blanca	87.50	100.00	96.25	108.75
Guayacan	137.50	150.00	146.25	158.75
Maria	62.50	75.00	71.25	83.75
Pilon	75.00	87.50	83.75	96.25
Roble	62.50	75.00	71.25	83.75
Mangle Colorado	106.25	118.75	115.00	127.50
Nispero	137.50	150.00	146.25	158.75

Notes:

1. Second grade Alcavu $68.75
2. Second grade Caoba Blanca 68.75
3. Second grade Cedro Amargo 93.75
4. Almendra, special 75.00
5. Alcareto, special 75.00
6. Amargo, special 75.00
7. The charge for dressing and kiln-drying the same for second grade as first grade.
8. The charge for dressing 2 sides or 4 sides lumber the same.

Commodities.	Unit.	Price.
Metal, yellow	Lb.	$0.375
Nuts, machine, hexagon, 1/4"	Lb.	.13
Nuts, machine, hexagon, 3/16"	Lb.	.11
Nuts, machine, hexagon, 5/16"	Lb.	.11
Nuts, machine, hexagon, 3/8"	Lb.	.085
Nuts, machine, hexagon, 7/16"	Lb.	.64
Nuts, machine, hexagon, 1/2"	Lb.	.275
Nuts, machine, hexagon, 5/8"	Lb.	.14
Nuts, machine, hexagon, 3/4"	Lb.	.21
Nuts, machine, hexagon, 7/8"	Lb.	.30
Nuts, machine, hexagon, 1"	Lb.	.14
Nuts, machine, hexagon, 1 1/8"	Lb.	.15
Nuts, machine, hexagon, 1 1/4"	Lb.	.25
Nuts, machine, hexagon, 1 3/8"	Lb.	.25
Nuts, machine, hexagon, 1 1/2"	Lb.	.41
Nuts, machine, hexagon, 1 5/8"	Lb.	.225
Nuts, machine, hexagon, 1 3/4"	Lb.	.56
Nuts, machine, hexagon, 1 7/8"	Lb.	.175
Nuts, machine, hexagon, 2"	Lb.	.59
Nuts, machine, hexagon, 2 1/8"	Lb.	.085
Nuts, machine, hexagon, 2 1/4"	Lb.	.56
Nuts, machine, hexagon, 2 1/2"	Lb.	.69
Nuts, machine, hexagon, 2 3/8"	Lb.	.125
Nuts, machine, square	Lb.	.375
Nails, common wire	Lb.	.13
Nails, galvanized	Lb.	.15
Oakum, navy, spun	Lb.	.20
Oakum, navy, unspun	Lb.	.175
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl of 42 gals.	3.50
Oil, fuel, at Balboa and Cristobal, in drums or barrels, no surcharge	Bbl of 42 gals.	3.75
Oils, greases, and lubricants:		
Oil, air, compressor cylinder	Gal.	.575
Oil, ammonia cylinder	Gal.	.685
Oil, burning	Gal.	1.56
Oil, cylinder, dark, marine	Gal.	1.125
Oil, cylinder, dark, marine	Gal.	1.25
Oil, ice, machine, steam	Gal.	1.00
Oil, engine, dynamo	Gal.	.79
Oil, engine, in tins	Gal.	.69
Oil, engine, in barrels	Gal.	.65
Oil, gas, engine, heavy, in barrels	Gal.	1.05
Oil, gas, engine, in cases, heavy	Gal.	1.175
Oil, gas, engine, in drums, medium	Gal.	.66
Oil, kerosene, in drums	Gal.	.375
Oil, kerosene, in tins (cases)	Gal.	.45
Oil, linseed, boiled	Gal.	2.50
Oil, linseed, raw	Gal.	2.19
Oil, locomotive engine	Gal.	.59
Oil, lard	Gal.	2.125
Oil, marine engine	Gal.	1.06
Oil, marine engine	Gal.	.625
Oil, marine engine	Gal.	1.06
Oil, marine engine	Gal.	.75
Oil, marine engine	Gal.	1.02
Oil, mineral seal	Gal.	.375
Oil, nonliquid	Lb.	.09

Commodities.	Unit.	Price.
Oils, greases, and lubricants—Continued.		
Oil, stationary engine	Gal.	$0.49
Oil, sperm	Gal.	2.875
Oil, gas engine motor, heavy	Gal.	.94
Oil, signal	Gal.	1.40
Oil, valve	Gal.	.975
Oil, car	Gal.	.34
Grease, black gear	Lb.	.115
Grease, yellow, cup, No. 3	Lb.	.14
Grease, yellow, cup, No. 5	Lb.	.17
Grease, rod, special	Lb.	.25
Grease, tunnel bearing	Lb.	.215
Tallow	Lb.	.225
Turpentine	Gal.	2.40
Turpentine, substitute	Gal	.69
Vaseline	Lb.	.18
Paint, lead, white, dry	Lb.	.175
Paint, lead, white, in oil	Lb.	.175
Paint, white, zinc, dry	Lb.	.225
Paint, white, zinc, in oil	Lb.	.21
Paint, white, zinc, 35 per cent in oil	Lb.	.19
Rivets	Lb.	.10
Rope, manila, ¼" diameter	C. ft	.69
Rope, manila, ⅜" diameter	C. ft.	1.50
Rope, manila, ½" diameter	C. ft.	2.50
Rope, manila, ⅝" diameter	C. ft.	4.185
Rope, manila, ¾" diameter	C. ft	5.075
Rope, manila, ⅞" diameter	C. ft	7.00
Rope, manila, 1" diameter	C. ft	8.75
Rope, manila, 1¼" diameter	C. ft	12.90
Rope, manila, 1½" diameter	C. ft.	19.69
Rope, manila, 1¾" diameter	C. ft	26.81
Rope, manila, 2" diameter	C. ft	31.44
Rope, manila, 2½" diameter	C. ft	51.50
Rope, manila, 3" diameter	C. ft.	76.25
Rope, manila, 3½" diameter	C. ft	81.25
Rope, manila, 4" diameter	C. ft	124.125
Soap, laundry	Lb.	.175
Soda, ash	Lb.	.05
Steel, bar	Lb.	.09
Steel, spring	Lb.	.21
Steel, cold, rolled, round	Lb	.20
Steel, sheet	Lb	.06
Steel, structural (angles, beams, etc.)	Lb.	.06
Tin, block	Lb.	.69
Tin, banca	Lb.	.625
Tin, sheet	Lb.	.225
Washers, cut	Lb	.15
Waste, colored	Lb.	.26
Waste, white	Lb.	.26
Zinc, boiler plate, ⅜" x 6" x 12"	Lb.	.21

Passenger-Carrying Transports to Pacific Coast.

Advice has been received from our Washington Office to the effect that it is not contemplated, according to the latest information received from the Quartermaster General of the Army, that any passenger-carrying transports will be sent from New York through the Panama Canal to the Pacific Coast for at least the next several months.

Employees having applications on file for transportation on such transports should notify the Executive Office at once as to whether their names shall be retained on the list for such transportation when available, and if not, whether the application is to be canceled or other transportation is desired.

April Weather Probabilities.

The following weather conditions may be expected at the Canal entrances during the month of April, 1921. These predictions are based on the weather records at Cristobal and Balboa Heights for the last 13 and 15 years, respectively:

Winds—April marks the end of the dry season and some change toward rainy season conditions may be expected the latter part of the month. There will be a general decrease in wind movement. At the Atlantic entrance northerly winds will prevail with an average hourly velocity of about 13 miles. On the Pacific Coast the

prevailing direction will be from the northwest with an average hourly velocity of about 9 miles. A maximum velocity greater than 30 or 35 miles an hour is not likely to occur on either coast.

Rain—Light to moderate showers may be expected occasionally at both Canal entrances. The monthly average rainfall at Cristobal is 4.29 inches, and at Balboa Heights, 3.09 inches. About 16 days with rain (0.01 inch or more) may be expected on the Atlantic Coast and 9 on the Pacific Coast.

Fogs—No fogs are likely to occur at either Canal entrance. Occasional fogs may be expected over the Gaillard Cut section of the Canal, but these will probably be light and be dissipated before 8.30 a. m.

Temperature—The monthly mean temperature will average about 81° F. on both coasts, but the daily range will be much greater on the Pacific side. On the Atlantic side, 90° F. is the highest and 72° F. the lowest that may be expected, but a maximum of 97° and a minimum of 64° may possibly occur on the Pacific Coast.

Relative humidity—The relative humidity will average about 80 per cent on the Atlantic side and about 78 per cent on the Pacific side, but the daily range is much greater on the Pacific side.

Storms—No general storms are likely, except an occasional "Norther" may occur during the month. The "Norther" of April 3–6, 1915, was the most severe storm since the American occupation. A maximum wind velocity of 46 miles an hour from the north was recorded, the highest wind velocity on record for the Atlantic side. However, this was a storm of unusual intensity. Intensified Northeast trades frequently cause rough seas and a heavy swell outside the breakwater at Colon. Smooth and moderate seas may be expected on the Pacific side.

Tides—Tidal fluctuations on the Atlantic side are too small to affect navigation. Balboa tide predictions for April are given below:

Day of- W.	Day of- Mo.	Time and Height of High and Low Water.				Day of- W.	Day of- Mo.	Time and Height of High and Low Water.				Day of- W.	Day of- Mo.	Time and Height of High and Low Water.			
F	1	4:12	10:15	4:40	10:39	M	11	5:38	11:54	5:54	.....	Th	21	2:44	9:01	3:04	9:31
		3.3	11.3	4.3	11.1			14.8	0.3	15.4	.....			15.3	0 0	16.0	-0.7
S	2	5:12	11:25	5:42	11:52	Tu	12	0:16	6:22	12.37	6:37	F	22	3:31	9:46	3:48	10:13
		3.6	11.3	4.3	11.2			-0.2	14.7	0:7	15.1			15.6	-0.3	16.2	-1.1
S	3	6:12	12:28	6:42	.....	W	13	1:01	7:08	1:27	7:25	S	23	4:16	10:28	4:32	10:54
		3.6	11.7	3.9	.....			0.2	14.4	1.4	14.6			15.6	-0.3	16.1	-1.0
M	4	0:51	7:09	1:17	7:37	Th	14	1:54	7:58	2:24	8:20	S	24	5:01	11:09	5:15	11:33
		11.6	3.3	12.4	3.2			0.8	14.0	2.0	13.9			15.5	0.0	15.7	-0.6
Tu	5	1:38	7:59	1:59	8:24	F	15	2:54	8:56	3:23	9:23	M	25	5:44	11:49	5:57	.....
		12.3	2.6	13.2	2.3			1.5	13.5	2.5	13.3			15.1	0.7	15.2	.....
W	6	2:19	8:44	2:38	9:05	S	16	3:59	10:05	4:38	10:38	Tu	26	0:13	6:27	12:30	6:33
		12.9	1.9	13.9	1.4			1.9	13 2	2.6	13.0			0.1	14.5	1.5	14.4
Th	7	2:58	9:24	3:15	9:44	S	17	5:06	11:21	5:45	11:54	W	27	0:56	7:09	1:15	7:19
		13.6	1.2	14.6	0.5			1.9	13.4	2.3	13.3			1.0	13.8	2.5	13.6
F	8	3:37	10:01	3:53	10:21	M	18	6:12	12:23	6:50	.....	Th	28	1:42	7:53	2:05	8:02
		14.1	0.6	15.1	-0.1			1.7	14.1	1.7	.....			2.0	13.1	3.4	12.7
S	9	4:15	10:38	4:31	10:58	Tu	19	0:59	7:15	1:26	7:50	F	29	2:33	8:38	3:01	8:50
		14.5	0.2	15.4	-0.5			14.0	1.2	14.9	0.8			2.9	12.5	4.1	11.9
S	10	4:56	11:16	5:11	11:36	W	20	1:54	8:11	2:16	8:43	S	30	3:30	9:32	4:03	9:50
		14.8	0.1	15.5	-0.6			14.7	0.6	16.6	0.0			3.6	12.0	4.5	11.3

The tides are placed in the order of their occurrence; the *times* of high and low tides are shown on the upper lines. The figures in boldfaced type are hours and elevations between noon and midnight; *ante meridian* figures are given in the ordinary lightfaced type. The time is Cosmopolitan Standard for the meridian 75° W.

The *elevations* of the water are shown on the second line for each day; a comparison of consecutive heights will indicate whether it is high or low water. Heights are reckoned from mean low water springs, which is 8.3 below mean sea level and is the datum of soundings on the Coast and Geodetic Survey charts for this region. The depth of water may accordingly be estimated by adding the tabular height of the tide to the soundings, unless a minus (–) sign is before the height, in which case it is to be subtracted. The annual inequality or variation in the mean sea level is included in the predictions.

Correction.

In the table, "Movements of Ocean Vessels," published in issue No. 17 of the current volume, the nationality of the British steamship *Port Melbourne* was erroneously published as American.

Civil Service Examinations.

Clerk (male and female); optional subjects of typewriting, bookkeeping, accounting training and experience, general business training and experience, timekeeping training and experience; Postal Clerk (male and female); usual entrance salaries, $116.67 to $158.33 a month; form 1312; announcement No. 484-amended; age 18 but not 45 years; vacancies exist in The Panama Canal Service; April 9, 1921.

Stenographer and typist (male and female); usual entrance salaries, $137.50 and $158.33 a month; form 1312; announcement No. 484-amended; age, 18 but not 45 years; vacancies exist in The Panama Canal Service; April 16, 1921.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z., (telephone 286).

Aeronautical draftsman, National Advisory Committee for Aeronautics (male and female); $1,200 to $1,600 a year, Grade 1; $1,600 to $2,000 a year, Grade 2; $2,000 to $2,400 a year, Grade 3; $2,400 to $2,800 a year, Grade 4; form 1312; announcement No. 127; age, 18 but not 55 years; vacancies exist in the Langley Memorial Aeronautical Laboratory, Langley Field, Hampton, Va.; March 29, 1921.[1]

Electrical and mechanical aid (male and female); $7.60 per diem; announcement No. 132; form 1312; age, 26 but not 55 years; vacancies exist in the Public Works Department, Naval Air Station, Pensacola, Fla.; March 29, 1921.[1]

Executive assistant (male and female); $3,000 to $4,000 a year; announcement No. 146; form 2118; age, below 55 years; vacancies exist in the Division of Loans and Currency, Treasury Department, Washington, D. C.; April 5, 1921.[1]

Junior pharmacologist (male and female); $1,500 to $2,000 a year; announcement No. 144; form 1312; age, within reasonable age limits; vacancies exist in the Hygienic Laboratory, Public Health Service; Washington, D. C.; April 5, 1921.[1]

Laboratory aid in foreign seed and plant production (male and female); $840 to $1,000 a year; announcement No. 141; form 304; age, 18 but not 40 years; vacancies exist in the Bureau of Plant Industry, Department of Agriculture, Washington, D. C.; April 13, 1921.

Predatory animal inspector, $1,440 to $2,400 a year; biological assistant, $1,440 to $2,400 a year (male and female); announcement No. 140; form 2118; age, 21 but not 55 years; vacancies exist in the Bureau of Biological Survey, Department of Agriculture; April 5, 1921.[1]

Radio aid (male and female); $12.16 per diem; announcement No. 139; form 2118; age, within reasonable age limits; vacancies exist in the Machinery Division, Navy Yard, Boston, Mass.; March 29, 1921.[1]

Scientific assistant (male and female); $1,320 to $1,860 a year; announcement No. 131; form 1312; age, 20 but not 55 years; vacancies exist in the Department of Agriculture, Washington, D. C.; April 13–14, 1921.

Supervising dietitian (male and female); $2,460 and $65 in lieu of subsistence; announcement No. 133; form 1312; age, below 55 years; vacancies exist in the Public Health Service, Treasury Department, Washington, D. C.; March 29, 1921.[1]

Telephone operator, Departmental Service; $720 a year; No. 243-amended (supplemental); receipt of applications to close March 8, 1921.

Copyist draftsman, Navy Department, Washington, D. C.; $3.20 to $2,80 per diem; No. 250-amended (supplemental); receipt of applications to close March 8, 1921.

Junior engineer, grade 2 (civil, electrical, mechanical, signal, structural, telegraph, and telephone), Interstate Commerce Commission, $720 to $1,440 a year; No. 184-amended (supplemental); receipt of applications to close March 8, 1921.

Junior engineer, grade 1 (civil, electrical, mechanical, signal, structural, telegraph, and telephone); Interstate Commerce Commission, $1,500 to $1,920 a year; junior architect, $1,320 to $1,920 a year; receipt of applications to close March 8, 1921

Senior engineer, Grade 2 (civil, electrical, mechanical, signal, structural, telegraph, and telephone), Interstate Commerce Commission; $2,100 to $2,700 a year; senior architect, $2,100 to $2,700 a year; No. 504-amended (supplemental); receipt of applications to close March 8, 1921.

Senior land appraiser, $1,800 to $2,700 a year; junior land appraiser, $900 to $1,500 a year; Interstate Commerce Commission; No. 49-supplemental; receipt of applications to close March 8, 1921.

[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings, or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Manuel Carmona *alias* Arista	23684	Colombia	Cristobal	Panama Railroad Co.	Feb. 27, 1921.
Amedee Gavot, *alias* C. Morain	21378	Guadeloupe	Panama	Supply Department	Feb. 5 or 6, 1921.
Joseph Modest	45551	Martinique	Camp Bierd	Panama Railroad Co.	Feb. 21, 1921.
Edward Rankin	28018	Jamaica	Ancon	Mun. Eng. Div.	Feb. 21, 1921.
James Gibson	2594	United States	Colon Beach	The Panama Canal	Feb. 17, 1921.

Official Circulars.

Discipline.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 3, 1921.

CIRCULAR NO. 606-4:

Paragraph 6 of Circular No. 606, dated April 1, 1914, is amended to read as follows:

6. The head of a department may suspend an employee, or write a letter of reprimand or caution to him. In either case a copy of the order of suspension, showing period and cause, or letter of reprimand, should be sent at once to the office of the Executive Secretary, for the information of the Governor, and in order that it may be affixed to the personal file of the employee. Nothing to an employee's detriment or damage shall be placed on his personal file without his knowledge or having had a chance to defend himself.

JAY J. MORROW,
Acting Governor.

Application of Retirement Act to Reinstated Civil Service Employees.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 1, 1921.

To all concerned—The following, quoted from a decision of the Solicitor of the Interior Department, is published for the information of all concerned:

"The Department requests that decision be obtained of the following questions arising under the Retirement Act of May 22, 1920, affecting the rights of former civil service employees who apply for reinstatement to positions in the classified civil service after having had the 2½ per cent refund returned to them by the Commissioner of Pensions.

1. Is the redeposit of refund a condition precedent to reinstatement? A. No.

2. If an employee may be reinstated without making the redeposit of fund, may he at any future time elect to make the redeposit and receive credit for the service covered by the redeposit? A. Yes.

3. May an employee be reinstated and elect to receive no credit for the time served for which he received the refund and receive credit for service subsequent to the reinstatement? A. No.

4. If an employee may elect not to make redeposit of refund, will he, by so electing, lose all rights or benefits under the Retirement Act which accrue from service rendered subsequent to the reinstatement? A. Yes.

5. If it is held that an employee may elect not to make redeposit of refund and by so electing loses all past or future rights under the Retirement Act, should the 2½ per cent deduction be made from his salary, pay or compensation? A. Yes.

My answers to questions 1 to 4, inclusive, are predicated on that portion of Section 11 of the Act reading as follows:

'That all money so returned to an employee must be redeposited with interest before such employee may derive any benefit under the provisions of this Act, upon reinstatement or retransfer to a classified position.'

* * * In answer to question 5 I have stated that the 2½ per cent deduction from salary, pay or compensation must be taken during the period of service after the reinstatement even though the employee may never qualify for annuity by making redeposit of funds theretofore returned to him. This follows from the provision of Section 8. * * * ."

C. A. MCILVAINE,
Executive Secretary.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 419.

PORT OF BALBOA.

*ARRIVALS.

Date.	Vessel.	Line.	From—
Feb. 27	Laura C. Hall	Pacific Metals Corporation	Buenaventura.
Feb. 27	Buchanan	United States Navy	Sea.
Feb. 28	Birmingham	United States Navy	Sea.
Feb. 28	Wickes	United States Navy	Sea.
Feb. 28	Phillip	United States Navy	Sea.
Feb. 28	Evans	United States Navy	Sea.
Feb. 28	Aaron Ward	United States Navy	Sea.
March 5	Aysen	South American Steamship Co	Valparaiso.

*DEPARTURES.

Date.	Vessel.	Line.	For—
Feb. 28	Coolcha	Pacific Motorship Co	Callao.
March 4	Laura C. Hall	Pacific Metals Corp	Buenaventura.

*Other than ships passing through the Canal.

Sale of Mileage Books.

PANAMA RAILROAD COMPANY,
BALBOA HEIGHTS, C. Z., March 2, 1921.

CIRCULAR No. RA-711:

To all concerned—1. Circular RA-695 was issued August 31, 1920, outlining conditions under which reduced rate mileage was to be sold to employees, personnel of the United States Army and Navy, their families and others entitled to this class of transportation, as provided in Governor's Circulars 608, 608-4, 608-5, RA Circular 624 and 684, but it is noted that these regulations are not being folllowed.

2. A new employee's mileage book, form EM 250, has been put up and is ready for distribution (similar in form to the commercial mileage), containing strip for 250 miles, to be sold for $7.50, as provided in Passenger Tariff No. 8 and the foregoing authorities.

3. These books are to be sold to employees, on the gold roll, personnel of the United States Army and Navy, in uniform, and their immediate families (as provided in contract on back cover) consisting of wife, children, and servants. When issued to the personnel of the United States Army and Navy, the name, rank, and branch of service should be shown, as provided in Governor's Circular 608-4.

4. These books are also to be sold for the use of nonresident visiting guests of employees, on the gold roll, and personnel of the United States Army and Navy, relatives not engaged in private business who reside with employees, on the gold roll, and service personnel, provided authority is secured from Executive Office, and in such cases the names must be shown, and the original authority sent to the Auditor's office with monthly accounts. Books should not be issued merely showing for "sister, father, aunt, cousin, friend, visiting relative, etc."

5. If the books already issued, should be desired for use of any additional members entitled to this privilege, such books should be sent to the Executive Office for validation, with the names of the relatives or guests, and the length of time they will remain on the Isthmus, as provided in Governor's Circular No. 608-5.

6. Mileage books are not to be sold to silver employees, unless they are citizens of the United States, and are able to identify themselves with the current year's 24-trip books, or, special authority from the Executive Office.

7. Agents are cautioned to make sales of this class of transportation accordingly.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved and compliance directed.

S. W. HEALD,
Superintendent.

Unserviceable Grindstones.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., February 24, 1921.

To all concerned—It is requested that all unserviceable grindstones be shipped to Mr. L. A. Byrnes, Cattle Industry Division, Summit, C. Z.

ROY R. WATSON,
Acting Chief Quartermaster.

Manufacture of Nonstandard Material Not in Stock.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., February 26, 1921.

To all concerned—Heads of departments and divisions are requested to discontinue submitting foreman's orders to the General Storekeeper of the Supply Department, covering nonstandard material, bearing the notation "if not in stock, have manufactured."

Nonstandard material not in stock at the storehouse should be obtained by placing regular work request, form 159 or 3431, on the Mechanical Division or other division manufacturing the articles desired.

ROY R. WATSON,
Acting Chief Quartermaster.

Sale of Brown Hoist at Cristobal.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., April 4, 1921, and then opened, for the purchase of a "Fast plant" for handling coal and general merchandise, manufactured by the Brown Hoisting Machinery Co., Cleveland, Ohio. This plant has been used by the Panama Railroad Company at Cristobal for handling coal since 1906, and is now located at Dock 14, Cristobal, C. Z. The plant is no longer required and bids are solicited for the entire hoisting plant, including all parts above the rails on which it now stands, together with all spare parts now on hand which were purchased for use of this plant. Detailed description and form of proposal may be had upon application to the office of the Chief Quartermaster. The Panama Canal reserves the right to reject any or all bids.

Additions to Commissary Stock.

Dry Goods Section.

Books, crochet, No. 16, ea.	$0.13
Cream, day, Pompeian, jar	.42
Pins, hair, black, 3½", box	.05
Pins, hair, black, 4", box	.05
Sponges, white velvet, ea.	.05
Sheets, bleached, 72" x 99", ea.	1.65

COMMISSARY NOTES.

Service Improvement, Cristobal Commissary.

Several changes have been made in the arrangement of the first floor of Cristobal Commissary, the book, music, and stationery section having been removed from the balcony to the space formerly occupied by the toilet goods counter, which has been moved just south of its previous location. The grocery sections have been consolidated and it is believed that the changes effected will make for improved service in every respect.

Chinaware.

The Commissary Division has made repeated efforts to obtain better deliveries on its orders for Minton chinaware. According to the latest information from the manufacturers the situation is more encouraging and before long shipments of large quantities will, in all probability, be resumed. The potteries have recently employed a number of their workpeople, who left when the demand for this class of goods fell off during the war, so that they hope in the near future to be able to make much quicker deliveries. They have stated that the Commissary Division's requisitions will receive every possible attention.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Volume XIV. Balboa Heights, C. Z., March 16, 1921. No. 31.

Changes to Tariff No. 4—Reduction of Prices of Coal.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., March 12, 1921.

To all concerned—The following changes are made to Tariff No. 4, Schedule of Rates for Supplies and Services furnished to Shipping and Allied Interests at the Panama Canal:

ITEM 21—COAL.

(Effective March 15, 1921.)

	Cristobal-Colon.	Balboa.
1. For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 2	$12.00	$14.00
2. For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting transit		12.00
3. For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds	13.00	15.00
4. For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 3, per ton of 2,240 pounds	14.00	16.00
5. When request is made by commander of vessel, chief engineer, or agent, for trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, an additional charge of 90 cents per ton will be made for extra handling.		
6. For lump coal for galley use, delivered in sacks, additional charge per ton, $10. Should the vessel furnish satisfactory sacks, the price will be only $3 per ton additional. Not more than 5 tons will be supplied to a vessel.		
7. For coal for cargo, delivered only by special authority of the Governor, per ton of 2,240 pounds	14.00	16.00

JAY J. MORROW,
Acting Governor, The Panama Canal.
Second Vice President, Panama Railroad Company.

(NOTE.—The above changes will be included in Supplement No. 4 to Tariff No. 4, when the supplement is issued.)

Classification of Cargo Passing Through the Canal in January.

A classification of the cargo handled through the Canal in the month of January is published on pages 458, 459, and 460. This shows the principal items, as closely as they can be determined, and the areas of origin and destination. The figures are not absolute, for the reason that additional quantities may have been shipped under the designation "general cargo," but approach closely to complete accuracy on the principal items.

The Rebuilt "Marne" Reported Loading at New Orleans for France.

The *Times Picayune* of New Orleans carried an item in an issue recently received on the Isthmus, reporting the arrival there of the steamship *Marne* from "the Balboa shipyards" of The Panama Canal, "rebuilt and equal to a new vessel." The *Marne* was reported to be taking on a general cargo for France.

Classification of Cargo Passing Through the Canal from the Atlantic to the Pacific, by Commodities, Showing Origin and Destination of same. Month of January, 1921.

(Figures represent tons of 2,240 pounds.)

Commodity.	Total.	From— East coast of United States.	From— British Isles.	From— Other European.	From— Cristobal, C. Z.	From— Mexico.	From— Others.	To— West coast of South America.	To— West coast of United States.	To— Australasia.	To— Far East.	To— Others.
Agricultural implements	3,552	3,489	39	24				131	29	2,630	750	12
Automobiles	1,012	973	5	24	10			91	7	408	495	11
Alcohol	10	10								10		
Ammunition	2,510	10	2,500					2,500	10			
Canned goods:												
Fish	115	5	58	52				49	10			56
Fruit	3		3					3				
Meat	251			247	4			4	247			
Others	273		273					273				
Cement	6,129	750	3,367	1,750	262			5,547	500			82
Chemicals	481	433	31	17				10	7	404	29	31
Coal	110,648	108,937	1,711					76,157	179	21,214	1,100	11,998
Chalk	1,982		174	1,808					1,982			
Caustic soda	33	33							33			
Canary seed	72						72		72			
Cocoa	168		141		27				168			
Coffee	1,736				52		1,684		1,736			
Cotton	4,442	4,442									4,442	
Cotton seed	25			25				25				
Dried blood and tankage	498						498		498			
Dye	500	500									500	
Epsom salts	21		21						21			
Flour	123	20			103			123				
Fruits, dried	36		34	2					36			
Glass	153			153				97	56			
Ink	24	24							24			
Jute	50			50				50				
Lard	9		9					9				
Liquors	466		111	231	124			253				213
Lumber	60	60								40	20	
Matches	23	12		11				11	12			
Marble	460			460				460				
Manufactured goods:												
Iron and steel	60,855	59,669	438	126	622			9,086	33,290	3,326	14,450	703
Railroad material	8,127	8,127						663	500	1,558	5,316	90
Machinery	6,088	5,771	61	94	146		16	1,761	45	3,144	1,000	138
Textiles	908	428		301	179			169	311		408	20
Others	7,267	5,793	1,200	46	228			138	2,223	1,686	2,900	320
Mineral water	8		8					8				
Oils:												
Crude	122,725	11,895				110,830		61,965	29,000	360	11,500	19,900
Refined	31,840	31,671	134		35			286		6,023	25,501	30
Oil, olive	50			50				50				
Oil, vegetable	25		25					25				
Ore, manganese	52		52						52			
Paints	518		30	488				518				
Paper	1,972	886	45	1,016	25			1,067	295	200	410	
Pulp	220			220				220				
Seeds	20		20						20			
Silver sand	7,044			7,044					7,044			
Soap	129	118			11			11	118			
Skins and hides	111						111		111			
Sulphur	13,200	13,200							7,000	6,200		
Sugar	4,950						4,950					4,950
Tobacco	1,622	1,622							145	797	680	
Toys	36			36					36			
Wool	35			35				35				
Wax	150	150						150				
General	153,341	96,793	30,662	13,279	12,482		125	34,182	41,135	59,213	16,679	2,132
Totals	557,158	355,821	41,152	27,589	14,310	110,830	[1] 7,456	196,127	126,952	107,213	86,180	[2] 40,686

[1] 5,091 tons originated from West Indies;
2,365 tons originated from east coast of South America.

7,456 tons.

[2] 6,433 tons were destined to west coast of Canada.
2,354 tons destined to west coast of Central America.
31,899 tons were destined to Balboa, C. Z.

49,686 tons.

Classification of Cargo Passing Through the Canal, from the Pacific to the Atlantic, by Commodities, Showing Origin and Destination of same. Month of January, 1921.

(Figures represent tons of 2,240 pounds.)

Commodity.	Total.	From— West coast of South America.	West coast of United States.	Australasia.	Far East.	Others.	To— East coast of United States.	British Isles.	Other European.	Cristobal, C. Z.	Others.
Automobiles	5	2	3						5		
Bark:											
Peruvian	20	20								20	
Quillay	41	41					5	5	31		
Barley	24,374		24,374					21,424	2,950		
Balsa wood	65	65					65				
Beans, peas, lentils	1,001	449	552				841	16	140	4	
Borax	1,810	1,810						1,300	510		
Bran	305	305						305			
Bristles	250				250		250				
Bristol wood	33				33		33				
Cacao	2,144	2,144					1,612		126	406	
Canned goods:											
Fish	1,955		696			1,259	1,530	156	269		
Fruit	3,782		3,479	303			3,434	303	45		
Meat	308	107		201				308			
Camphor	40				40		40				
Charcoal	54		54				54				
Chemicals	60				60		60				
Chrysanthemum seeds	450				450		450				
Clover seed	43	43						43			
Coffee	4,325	3,936	89			300	420	3,150	151	604	
Coco leaves	4	4								4	
Copra	3,436		739	2,600	97		297	3,139			
Cosmetics	44		44					44			
Cotton, raw	913	420	150		343		493	135		285	
Cotton seed	413	413						226		187	
Cotton seed oilcake	4,683	4,683						1,058	3,625		
Flour	3,316		3,316					1,201	2,115		
Fruits, dried	987		897	90				90	897		
Cold storage:											
Butter	6,532			6,532				6,532			
Cheese	8,290			8,290				8,290			
Dried milk	1,590			1,590				1,590			
Beef	8,414			8,414				8,414			
Mutton	18,848			18,848				18,848			
Tallow	1,960		274	1,686				1,686	274		
Glaxo	511			511				511			
Other	2,139		760	1,379				1,379	760		
Guaiac	2,575			2,575				2,575			
Guano	4,000	4,000						4,000			
Gum, Kauri	555			555				555			
Hats	6	4			2		2	2		2	
Hemp	2,722			1,833	889		889	1,833			
Honey	43	43							43		
Horns and hoofs	71	18		53			4	53	14		
Indigo	15	10				5	3	7		5	
Infusorial earth	120		120				120				
Iodine	83	83					18	62	3		
Ivory nuts	754	754							469	285	
Leather	77	77							77		
Licorice roots	1,500				1,500		1,500				
Lime	24		24							24	
Liquors	64			64				64			
Lumber	58,785		43,796		390	14,599	22,854	26,302	6,459	47	3,123
Machinery	67	58	9					4		58	5
Nitrates	195,885	195,885					68,293	20,875	90,064	16,653	
Oats	5,624	1,511		4,113				5,624			
Metals:											
Copper	11,665	7,625	447	1,458		2,135	5,906	2,253	505	3,001	
Tin	265	265						265			
Silver	40	40						40			
Various	602	602					296		306		
Oils:											
Lubricating	18,326		18,326				18,326				
Coconut	1,783				1,783		1,783				
Gas	11,400		11,400				11,400				
Gasoline	8,463		8,463								8,463
Vegetable	555			500	55		55	500			
Ores:											
Antimony	176				176		176				
Copper	2,397	2,397					2,302	58	25	12	
Gold and silver	135	135					60	74		1	
Tin	1,862	1,862					800	438	600	24	

Classification of Cargo Passing Through the Canal, from the Pacific to the Atlantic—Contd.

Commodity.	Total.	From— West coast of South America.	West coast of United States.	Australasia.	Far East.	Others.	To— East coast of United States.	British Isles.	Other European.	Cristobal, C. Z.	Others.
Ores—Continued.											
Chrome	12,324			12,324				12,324			
Manganese	3,418				2,830	588	3,418				
Vanadium	2,367	2,367					2,367				
Zinc	200			200				200			
Paper	21	21								21	
Phosphates	10			10				10			
Rice	3,845	1,273	1,072		1,500			91	2,254		1,500
Rubber	1,994	12		9	1,973		1,973	18		3	
Sand	20			20				20			
Silk	33	29			4		4	29			
Skins and hides	994	85		791	100	18	109	823		62	
Sugar	21,577	21,356			221		221	21,356			
Tea	1,912				1,912		1,912				
Tobacco	116				116		116				
Tomato puree	855		855				855				
Wheat	59,606		59,606					3,759	55,847		
Woods, hard	271			23		248		23		248	
Wool	12,346		38	11,785	523		2,061	10,285			
Wood pulp	800				800		800				
General	63,402	5,257	27,720	24,148	5,698	579	35,183	23,365	3,276	1,578	
Totals	619,895	260,211	207,303	110,905	21,745	[1] 19,731	193,390	218,040	171,840	23,534	[2] 13,091

[1] 17,946 tons originated from west coast of Canada.
1,785 tons originated from west coast of Central America.

19,731 tons.

[2] 8,463 tons were destined to Canada.
4,628 tons were destined to West Indies.

13,091 tons.

Canal Traffic in February.

The number of commercial ships passing through the Canal in the month of February was 241, an average of 8.6 per day. Their aggregate net tonnage, Panama Canal measurement, was 916,838 tons. The total cargo carried was 952,904 tons of 2,240 pounds. The tolls earned amounted to $917,412.49.

The traffic of commercial vessels in February was distributed over the trade routes as shown in the following tabulation:

ATLANTIC TO PACIFIC.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From East Coast of United States to West Coast of South America:							*Long tons.*
United States	8	20,687	26,232	32,978	20,771	$25.824.15	25,896
British	6	14,872	19,607	26,141	15,527	18,590.00	16,081
Japanese	4	13,757	15,902	20,880	13,612	17,016.65	25,352
Danish	3	10,999	11,445	13,821	10,694	13.345,35	20,182
Norwegian	3	6,188	7,859	9,370	5,815	7,651.55	12,622
French	2	6,850	7,897	10,646	6,661	7,054.82	5,206
Totals	26	73,353	88,942	113,836	73,080	89,482.52	105,339
From East Coast of United States to Far East:							
United States	6	26,237	29,035	36,687	24,398	32,439.70	45,734
Japanese	5	18,697	21,387	28,600	18,473	23,170.60	23,127
British	4	14,479	16,536	18,889	12,015	17,869.90	24,332
Totals	15	59,413	66,958	84,176	54,886	73,480.20	93,193
United States coastwise:							
United States	15	64,302	80,940	101,629	62,825	79,169.20	67,302
From Europe to West Coast of South America:							
British	4	16,608	20,002	24,443	14,792	20,443.50	14,462
Italian	2	8,211	9,574	13,810	8,452	10,235.80	2,460
French	1	3,631	4,166	5,818	3,712	4,538.75	2,515
Dutch	1	3,320	5,466	5,248	3,262	4,150.00	2,465
Chilean	1	485	452	857	543	542.40	650
Totals	9	32,255	39,660	50,176	30,761	39,910.45	22,552

ATLANTIC TO PACIFIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From Cristobal, C.Z., to West Coast of South America:							*Long tons.*
British	6	3,989	6,221	8,036	4,576	$4,936.48	1,332
Chilean	1	1,811	3,182	3,798	2,272	2,263.75	1,000
Peruvian	1	1,506	2,951	4,744	2,673	1,882.50	917
United States	1	336	350	615	372	252.00	.....
Totals	9	7,642	12,704	17,193	9,893	9,334.73	3,249
From East Coast of United States to Australasia:							
British	3	12,110	15,162	19,224	12,040	15,137.50	20,993
Japanese	1	4,358	4,389	5,859	4,260	5,266.80	8,000
Norwegian	1	2,568	3,273	3,899	2,503	3,210.00	4,850
Swedish	1	2,563	2,807	4,126	2,958	3,203.75	5,563
Totals	6	21,599	25,631	33,108	21,761	26,818.05	39,406
From Mexico to West Coast of South America:							
United States	4	20,924	22,503	28,880	20,791	25,592.75	36,878
Norwegian	1	4,441	5,095	7,020	4,420	5,551.25	9,250
Totals	5	25,365	27,598	35,900	25,211	31,144.00	46,128
From British Isles to Australasia:							
British	4	21,245	24,850	32,314	21,365	26,423.75	17,342
From East Coast of Mexico to West Coast of United States:							
United States	2	9,885	11,449	15,470	9,573	12,356.25	21,000
Norwegian	1	4,447	5,076	6,987	4,422	5,558.75	9,600
British	1	2,879	3,261	4,722	2,897	3,598.75	5,925
Totals	4	17,211	19,786	27,179	16,892	21,513.75	36,525
Cristobal, C. Z., to West Coast of Central America:							
British	3	2,055	2,232	3,827	2,061	2,547.65	1,411
Costa Rican	1	144	152	158	93	109.44	.....
Totals	4	2,199	2,384	3,985	2,154	2,657.09	1,411
West Indies to West Coast of Central America:							
British	3	(1)	(1)	(1)	(1)	3,125.50	.....
From Europe to West Coast of United States:							
Dutch	1	4,860	6,068	7,651	4,796	6,075.00	750
United States	1	4,506	4,954	6,040	4,506	5,632.50	1,650
Totals	2	9,366	11,022	13,691	9,302	11,707.50	2,400
From West Indies to Australasia:							
British	2	5,678	7,175	8,995	6,135	7,097.50	11,360
Norwegian	1	673	700	765	690	504.75	.....
Totals	3	6,351	7,875	9,760	6,825	7,602.25	11,360
From Cristobal, C.Z., to West Coast of United States:							
United States	2	2,986	3,756	4,796	2,963	3,732.50	2,185
From Mexico to West Coast of Canada:							
United States	1	4,945	6,379	6,766	3,861	6,181.25	10,000
From East Coast of United States to Balboa, C. Z.:							
United States	1	4,329	5,326	7,044	4,351	5,568.75	8,900
From Canada to Australasia:							
British	1	4,117	4,151	5,465	3,400	5,077.20	3,080
Foreign ship in ballast between United States coastwise ports:							
Norwegian	1	2,237	3,767	3,660	2,221	2,712.24	.....
Mexican coastwise ports:							
French	1	2,155	2,096	2,953	1,880	2,515.20	3,000
From East Coast of South America to Balboa, C. Z.:							
United States	1	417	478	2,026	417	344.16	.....
From East Coast of United States to West Coast of Central America:							
Panaman	1	940	930	1,141	916	1,116.00	1.500
Grand totals	114	362,427	435,233	556,798	354,964	449,616.29	474,872

[1] Three British warships with an aggregate displacement tonnage of 6,251.

PACIFIC TO ATLANTIC.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From West Coast of South America to Europe.							*Long tons.*
British	9	40,297	49,522	67,043	39,687	$50,259.95	53,152
Japanese	2	7,795	8,705	11,340	7,663	9,549.70	15,774
United States	2	6,446	8,587	10,396	6,422	8,057.50	14,100
Spanish	2	5,830	6,631	7,834	5,498	7,187.80	11,786
Norwegian	2	5,027	5,513	6,778	4,248	6,195.95	9,675
Italian	1	3,339	4,266	5,860	3,486	4,173.75	100
Dutch	1	2,012	3,120	3,209	1,989	2,515.00	4,650
Danish	1	1,788	1,795	2,028	1,188	2,154.00	3,160
Totals	20	72,534	88,139	114,488	70,091	90,093.65	112,397
United States coastwise:							
United States	17	55,287	66,043	87,246	55,853	66,703.70	68,345
West Coast of South America to East Coast of United States:							
United States	9	24,046	30,019	39,989	24,258	28,074.30	39,535
Norwegian	4	10,305	11,244	14,585	8,647	12,679.45	18,821
British	3	8,663	11,534	15,664	9,227	10,828.75	7,614
Spanish	1	2,232	2,793	3,460	2,021	2,790.00	5,289
Totals	17	45,246	55,590	73,698	44,153	54,363.50	62,259
West Coast of United States to Europe:							
United States	7	30,993	36,865	45,092	31,247	38,741.25	51,784
British	3	11,120	12,207	15,426	10,534	13,709.80	21,095
Swedish	1	3,411	5,661	5,642	4,320	4,263.75	7,730
Norwegian	1	3,053	3,886	4,894	3,054	3,816.25	6,000
Dutch	1	3,013	3,856	4,751	2,964	3,766.25	6,808
Totals	13	51,590	62,475	75,805	52,119	64,297.30	93,417
West Coast of South America to Cristobal, C. Z.:							
British	8	5,978	9,595	12,431	6,932	7,472.50	2,684
United States	2	672	700	1,230	744	840.00	1,078
Chilean	1	1,811	3,182	3,798	2,272	2,263.75	546
Totals	11	8,461	13,477	17,459	9,948	10,576.25	4,308
West Coast of South America to East Coast of Mexico:							
British	3	10,862	12,711	16,905	10,571	9,762.28	230
United States	2	9,972	11,866	14,028	9,560	8,731.62	.....
Norwegian	2	8,885	10,193	13,984	8,856	7,338.96	.....
Totals	7	29,719	34,770	44,917	28,987	25,832.86	230
West Coast of United States to East Coast of Mexico:							
United States	5	22,236	25,087	33,464	21,837	19,922.68	1,200
British	1	3,271	3,717	5,167	3,230	2,676.24	.....
Totals	6	25,507	28,804	38,631	25,067	22,598.92	1,200
From West Coast of South America to Azore Islands.[1]							
British	3	8,784	10,410	14,305	8,608	10,980.00	20,678
Spanish	2	4,660	5,918	7,404	4,680	5,825.00	10,980
Norwegian	1	2,883	3,649	4,589	2,896	3,603.75	7,009
Totals	6	16,327	19,977	26,298	16,184	20,408.75	38,667
Australasia to Europe:							
British	5	21,022	24,710	30,075	19,336	26,022.60	23,771
Far East to East Coast of United States:							
United States	2	8,596	10,269	12,373	7,743	10,745.00	15,020
Japanese	1	4,363	4,416	5,863	4,267	5,299.20	1,878
British	1	5,392	6,208	8,655	5,403	6,740.00	7,200
Totals	4	18,351	20,893	26,891	17,413	22,784.20	24,098
West Coast of Central America to Cristobal, C. Z.:							
British	3	2,055	2,232	3,827	2,061	2,547.65	507
Costa Rican	1	144	152	158	93	180.00	235
Totals	4	2,199	2,384	3,985	2,154	2,727.65	742
From West Coast of United States to West Indies.[1]							
United States	3	11,642	14,328	17,523	11,646	14,552.50	21,379
From Australasia to East Coast of United States:							
United States	1	4,516	4,927	6,036	4,515	5,645.00	2,000
British	1	4,326	4,979	7,785	4,532	5,407.50	1,122
Totals	2	8,842	9,906	13,821	9,047	11,052.50	3,122

[1] For orders.

PACIFIC TO ATLANTIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From West Coast of South America to East Coast of United States:[1]							*Long tons.*
British	2	5,910	6,928	9,376	5,983	$7,387.50	11,400
From West Coast of Canada to East Coast of Mexico:							
United States	1	5,547	5,476	6,835	5,255	4,160.25	.....
From West Coast of Canada to East Coast of United States:							
United States	1	5,157	6,088	8,194	5,935	4,383.36	.....
From West Coast of South America to West Indies:							
United States [1]	1	4,670	5,100	6,322	4,670	5,837.50	8,830
United States	1	666	666	772	643	799.20	1,003
Totals	2	5,336	5,766	7,094	5,313	6,636.70	9,833
From Balboa, C. Z., to East Coast to Mexico:							
United States	1	4,455	5,313	7,045	4,351	3,825.36	.....
Balboa, C. Z., to East Coast of United States:							
United States	1	3,821	5,170	6,191	3,821	3,722.40	.....
From West Coast of United States to Cristobal, C. Z.:							
United States	1	1,654	2,165	2,643	1,654	2,067.50	205
From Far East to West Indies:							
Russian	1	1,471	1,580	2,679	1,334	1,838.75	.....
From West Coast of South America to East Coast of Canada:							
British	1	1,390	1,595	2,253	1,384	1,737.50	2,659
From Balboa, C. Z., to Cristobal, C. Z.:							
United States	1	30	30	34	30	22.50	.....
Grand totals	127	401.498	481,605	623,181	397,058	467,796 20	478,032

[1] For orders.

Commodities in February.

The following is a classification of cargo by commodities, showing origin and destination of same, passing through the Canal during the month of February, 1921. The figures represent tons of 2,240 pounds; the data are as close to accuracy as is possible in the use of the cargo declaration: but small shipments of these commodities have been included under "General cargo":

FROM ATLANTIC TO PACIFIC.

Commodity.	Total.	From—						To—				
		East coast of United States.	British Isles.	Other European.	Cristobal, C. Z.	East coast of Mexico.	Others.	West coast of South America.	West coast of United States.	Australasia.	Far East.	Others.
Agricultural implements	1,482	1,247	60	150	25	.....	.....	1,396	72	.....	15	.....
Ammonia, sulphate of	2,047	2,047	.....	.....	.....	.....	.....	.....	.....	2,047	.....	.....
Automobiles	493	111	.....	42	.....	.....	340	87	4	347	55	.....
Borax	15	15	.....	.....	.....	.....	.....	.....	.....	.....	15	.....
Canned goods:												
Fish	779	767	.....	12	.....	.....	.....	12	767	.....	.....	.....
Fruits	602	600	.....	2	.....	.....	.....	2	600	.....	.....	.....
Meats	9	.....	.....	3	6	.....	.....	9	.....	.....	.....	.....
Vegetables	135	.....	.....	5	130	.....	.....	135	.....	.....	.....	.....
Others	100	100	.....	.....	.....	.....	.....	100	.....	.....	.....	.....
Carbon, black	50	50	.....	.....	.....	.....	.....	.....	.....	.....	50	.....
Cement	9,731	4,020	2,284	3,420	7	.....	.....	8,097	.....	1,634	.....	.....
Chalk	100	.....	.....	100	.....	.....	.....	.....	100	.....	.....	.....
Chemicals	269	177	.....	72	20	.....	.....	216	50	.....	3	.....
Coal	90,101	90,101	.....	.....	.....	.....	.....	74,263	.....	14,838	.....	1,000
Cocoa	26	.....	.....	26	.....	.....	.....	26	.....	.....	.....	.....
Coffee	21	21	.....	.....	.....	.....	.....	.....	.....	.....	21	.....
Coke	175	55	120	.....	.....	.....	.....	175	.....	.....	.....	.....
Cold storage products	30	.....	30	.....	.....	.....	.....	.....	.....	30	.....	.....
Cotton, raw	6,423	6,407	.....	.....	16	.....	.....	16	.....	.....	6,407	.....

FROM ATLANTIC TO PACIFIC—Continued.

Commodity.	Total.	From— East coast of United States.	British Isles.	Other European.	Cristobal, C. Z.	East coast of Mexico.	Others.	To— West coast of South America.	West coast of United States.	Australasia.	Far East.	Others.
Cork	76	66			10			10	66			
Dye	20	20									20	
Explosives	6		6					6				
Fruits, dried	8				8			8				
Flour	19	15			4			19				
Glass	1,731	131		1,600					1,600		131	
Hats	1			1				1				
Jute	1			1				1				
Lard	67				67			67				
Lime, acetate of	103	103								103		
Liquors	808	8	50	260	490			465		50	8	285
Lumber	18	18						18				
Marble	88			88				88				
Manufactured goods:												
Electrical equipment	200	200						200				
Iron and steel	48,914	43,997	733	3,136	48		1,000	19,563	7,020	3,347	18,984	
Machinery	4,544	3,999		508	45			1,181	43		3,320	
Textiles	1,601	1,136		78	387			810	770		21	
Railroad material	12,678	12,558		120				1,376			11,302	
Other	6,129	3,488	2,229	412				1,156	2,348	2,229	396	
Metals:												
Iron	302	152		150				202	100			
Lead	38	38									38	
Tin	5,056	4,956	100					159	691		4,206	
Oils:												
Crude	105,069	9,400			16	95,653		46,144	36,525		500	21,900
Refined	61,680	61,672			8			1,724	8,800	15,075	35,581	500
Olive	81			81				81				
Paint	35	30			5			5			30	
Paper	4,051	962		245	21		2,823	441		2,823	787	
Quicksilver	4	4									4	
Rice	101				101			101				
Rosin	213	213						88		125		
Rubber, manufactured	76	76									76	
Salt	678		250		428			428		250		
Slate pencils	20	20									20	
Sugar	11,360						11,360			11,360		
Sulphur	15,414	15,414							9,851	5,563		
Tallow	2				2			2				
Tea	63			2	61			63				
Tobacco	2,420	2,383		1	36			137			2,283	
Turpentine	14	14						4		10		
Varnish	35	35									35	
Wax	2	2						2				
Wood, hard	239	239						10		24	205	
General	78,319	50,952	12,682	7,985	5,179		1,521	14,913	40,492	11,283	9,258	2,373
Totals	474,872	318,019	18,544	18,492	7,120	95,653	[1] 17,044	174,006	109,899	71,138	93,771	[2] 26,058

[1] 5,684 tons originated from east coast of Canada.
11,360 tons originated from West Indies.

17,044 tons.

[2] 3,981 tons destined to west coast of Central America.
3,000 tons destined to west coast of Mexico.
10,150 tons destined to west coast of Canada.
8,927 tons destined to Balboa, C. Z.

26,058 tons.

FROM PACIFIC TO ATLANTIC.

Commodity.	Total.	From— West coast of South America.	West coast of United States.	Australasia.	Far East.	Others.	To— East coast of United States.	British Isles.	Other European.	Cristobal, C. Z.	Others.
Agricultural implements	10		10				10				
Automobiles	1		1				1				
Barley	12,687	183	12,504				45	8,842	3,800		
Barks:											
Peruvian	47	47						8	28	11	
Cascarilla	13	13								13	
Beans	2,565	495	2,070				1,772			12	781
Beeswax	6	6						6			

FROM PACIFIC TO ATLANTIC—Continued.

Commodity.	Total.	From— West coast of South America.	West coast of United States.	Australasia.	Far East.	Others.	To— East coast of United States.	British Isles.	Other European.	Cristobal, C. Z.	Others.
Bismuth	2	2						2			
Borax	2,182	2,182						1,682	500		
Cacao	2,469	2,469					1,333		170	966	
Canned goods:											
Fish	3,781		3,691			90	1,658	2,033	90		
Fruit	1,210		1,128			82	340	115	755		
Meat	70			70				70			
Milk	100		100				100				
Vegetables	124		124				124				
Other	350		350				350				
Cereals	804		804					804			
Clover seed	26	26						26			
Coffee	4,341	2,605	159			1,577	1,635		1,248	1,458	
Cold storage:											
Casein	73			73				73			
Glaxo	315			315				315			
Mutton	4,892			4,892				4,892			
Tallow	180			180				180			
Cotton, raw	932	394	538				92	746		94	
Cotton seed	752	752						744	8		
Cotton seed oilcake	674	664	10					574	100		
Dyes	136			136				136			
Flour	12,316		12,116			200	5,157	7,159			
Fruit:											
Fresh	24		24					24			
Dried	159		159				100	59			
Gallstones	50				50		50				
Glue	25	25					25				
Hair	76		70	6			70	6			
Hats	9	9					5			4	
Hemp	1,544			64	1,480		1,480	64			
Honey	122	122						110	12		
Hops	139		139					139			
Horns	1	1						1			
Infusorial earth	453		453				453				
Iodine	204	204					25	179			
Ivory nuts	1,251	1,251					549		558	144	
Jute	854	14			840			854			
Leather	34		34				34				
Liquors	58	58								58	
Lumber	36,518	450	35,336			732	19,901	15,642	740	235	
Manufactured goods:											
Iron and steel	16		9	7			16				
Machinery	459	450	9							9	450
Textiles	594	594						594			
Other	205		205					205			
Metals:											
Copper	8,677	6,072	1,152	1,453			6,832	1,539		306	
Iron	50	50					50				
Lead	19	19						19			
Silver	2	2						2			
Tin	792	792						348	444		
Nitrate	191,928	191,928					47,567	16,014	68,447		[1] 59,900
Oats	1,840	834		1,006				1,840			
Onions	1,566		1,566				1,566				
Orchilla	2		2				2				
Ore:											
Antimony	520	20			500		520				
Copper	3,040	3,040					2,675	365			
Gold and silver	155	155					134	15		6	
Lead	54	54					54				
Manganese	15		15				15				
Platinum	2	2								2	
Tin	1,532	1,532					1,186	321		25	
Vanadium	228	228					192	36			
Oils, crude:											
Refined	21,322	2,659	18,663				18,663				2,659
Coconut	8,150				8,150		8,150				
Vegetable	1,113	171		2	940		1,113				
Paper	11		11				11				
Peanuts	2,000				2,000		2,000				
Peppers	400		400				400				
Quicksilver	12		12				12				
Rice	1,413		1,413				20	59	150	89	1,095
Rubber, raw	3,103	3			3,100		3,100			3	
Skins and hides	1,134	281	374	467		12	434	583	56	61	
Spices	9		9				9				

[1] 8,830 tons for orders.

FROM PACIFIC TO ATLANTIC—Continued.

Commodity.	Total.	From— West coast of South America.	West coast of United States.	Australasia.	Far East.	Others.	To— East coast of United States.	British Isles.	Other European.	Cristobal, C. Z.	Others.
Sugar	13,818	9,118	.....	.....	4,700	.....	4,700	8,601	517	.....	.....
Tobacco	45	2	43	.....	.....	.....	43	.....	.....	2	.....
Wax	5	5	.....	.....	.....	.....	.....	5	.....	.....	.....
Wheat	79,201	492	72,062	6,647	.....	.....	.....	34,609	23,213	.....	[1] 21,379
Wood, hard	697	673	.....	24	.....	.....	.....	167	.....	.....	530
Wool	5,977	170	424	5,335	48	.....	3,560	2,317	.....	.....	.....
General	35,347	10,422	16,329	6,130	2,290	176	19,153	12,682	754	1,208	1,550
Totals	478,032	241,740	182,518	26,807	24,098	[2] 2,869	157,586	125,806	101,590	4,706	[3] 88,344

[1] For orders.
[2] 2,000 tons originated from west coast of Central America.
869 tons originated from west coast of Canada.
2,869 tons.

[3] 1,430 tons destined to east coast of Mexico.
34,188 tons destined to West Indies.
38,667 tons destined to Azore Islands for orders.
2,659 tons destined to east coast of Canada.
11,400 tons destined to east coast of United States for orders.
88,344 tons.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending March 12, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Laded.
				Tons.	*Tons.*
Cauca	Pacific Steam Navigation Co	.....	March 8	.....	316
Panama	Panama Railroad Steamship Line	.....	March 8	.....	2,643
Ulysses	Panama Railroad Steamship Line	March 6	March 10	12,044	(3)
Mamei [1]	Panama Railroad Steamship Line	March 6	March 10	7,250	(3)
Parismina	United Fruit Co	March 7	March 9	1,010	3
Salvador	Pacific Steam Navigation Co	March 7	March 12	210	355
Acajutla	Pacific Steam Navigation Co	March 7	March 12	28	66
San Jose	Pacific Mail Steamship Co	.....	March 9	.....	1,042
Gen. H. F. Hodges	Panama Railroad Steamship Line	March 9	March 11	824	12
Falstria	East Asiatic Steamship Co	March 9	March 10	214	(3)
Advance	Panama Railroad Steamship Line	March 9	March 12	324	144
Achilles	Panama Railroad Steamship Line	March 9	.....	12,048	.....
Darien [1]	Panama Railroad Steamship Line	March 9	.....	7,344	.....
Trophan	Anglo-Saxon Petroleum Co	March 9	March 11	5,999	(3)
Asian	Leyland Line	March 10	March 12	620	13
Turrialba	United Fruit Co	March 10	March 10	(2)	10
La Navarre	French Line	March 10	.....	43	.....
Calamares	United Fruit Co	March 11	March 12	255	30
Gen. O. H. Ernst	Panama Railroad Steamship Line	March 11	.....	966	.....
San Mateo	United Fruit Co	March 12	March 12	80	[4] 998
Mantaro	Peruvian Line	.....	March 12	.....	1,872
Colon	Panama Railroad Steamship Line	March 12	.....	2,006	.....

[1] Barge. [2] No cargo discharged. [3] No cargo laded. [4] Pounds.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending March 12, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Laded.
				Tons.	*Tons.*
Salvador	Pacific Steam Navigation Co	March 6	March 6	2	.....
Madawaska [1]	United States Army	March 7	March 8	5	.....
Neches	United States Navy	March 7	March 9	7,860	.....
San Jose	Pacific Mail Steamship Co	March 9	March 9	.....	31
Cacique	W. R. Grace & Co	March 9	March 10	[2] 10	.....
Acajutla	Pacific Steam Navigation Co	March 12	March 12	.....	14

[1] U. S. Army transport. [2] For transshipment.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Completion of the "Lake Miraflores."

Nauticus reports in its issue of February 19 that among the vessels completed in United States shipyards during the month of January was the *Lake Miraflores*, of 2,677 gross tons, built at Saginaw, Mich., by the Saginaw Shipbuilding Company.

The *Lake Miraflores* was named in honor of Miraflores Lake, in the Panama Canal.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended March 12:

Bark C. D. Bryant, miscellaneous repairs to hull and boiler; U. S. S. *Satterlee*, miscellaneous C. and R. and engineering repairs; steamship *Steel Inventor*, repairs to hull; launch *Vacuum, Jr.*, general repairs; tender *Perico*, docking, staging, cleaning, painting, and miscellaneous repairs; U. S. S. *Mason*, miscellaneous hull repairs and docking; launch *Pilot*, general repairs; barges *Nos. 132* and *138*, general repairs; launch *Grace*, miscellaneous engine and hull repairs; steamship *Caribbean*, general repairs; U. S. submarines *O–11* and *O–16*, periodical overhaul; steamships *Kaweah*, repairs to anchor windlass; *Rovuma*, install 2 closed chocks aft; *Utique*, boiler repairs; *City of Berkeley*, small miscellaneous repairs; *Falstria*, services of diver; U. S. S. *Dolphin*, straighten bent davit.

The following vessels were at the Cristobal shops for repairs during the week ended March 14;

Steamships *Gen. H. F. Hodges*, *Achilles*, barge *Darien*, steamships *Advance*, *Gen. O. H. Ernst*, *Colon*, miscellaneous repairs and painting to engine, deck, and steward departments; U. S. Eagle *No. 31*, install ballast, clean and paint hull; steamship *Jamaica*, repair beams under boilers, repair auxiliary steam pump, etc.; schooner *Anthony Nichols*, repair keel, scrape and paint bottom, etc.; tug *Favorite*, calk seams both boilers; weld circulating engine column and other repairs in connection with same; launch *Arawan II*, renew camshaft starboard engine; launch *Ocolo*, manufacture, fit, and install one key for flywheel crankshaft, etc.; schooner *Chiquimula*, steamships *Haitian*, *La Navarre*, U. S. mine planter *Nones*, subchaser *No. 285*, dredge *No. 86*, minor repairs.

The Cost of Wasted Water.

The Municipal Engineering Division calls attention again to the waste involved in unnecessary leakage from water pipes.

A leaky faucet, or one carelessly not closed, from which there is no more than a rapid dropping, will allow the waste of 18 gallons of water in a day of 24 hours.

The following table has been calculated for average pressures existing in the water system of the Canal Zone; the "cost per quarter" shows the cost of the leaks for 3 months at the rate charged for water in Panama City:

Diameter of leak.	Gallons per day.	Cost per quarter.
Inches.		
Dropping	18	$0.41
1/64	51	1.16
1/32	208	4.73
1/16	825	18.77
1/8	3,300	75.08

Civil Service Examinations.

Clerk, optional subjects of typewriting, bookkeeping, accounting training and experience, general business training and experience, timekeeping training and experience; usual entrance salaries, $116.67 to $158.33 a month; Postal Clerk, usual entrance salary, $145.83 a month (male and female); form 1312; announcement No. 484-amended; age, 18 but not 45 years; vacancies exist in The Panama Canal Service, April 9, 1921.

Stenographer and typist (male and female); usual entrance salaries, $137.50 and $158.33 a month; form 1312; announcement No. 484-amended; age, 18 but not 45 years; vacancies exist in The Panama Canal Service; April 16, 1921.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, March 12, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Chile	2–24	3.44	6	6.12	6	13.49	6	15.14	British	Pacific Steam Navigation Co.	350.0	43.1	18.4	Cristobal	Valparaiso	General	466	4,065	2,668
Maraya [2]	2–27	11.00	6	6.17	6	13.38	6	14.40	Peruvian	Carlos Vallencia	92.0	14.0	5.0	Belize	Callao	Ballast		62	49
Loretta	5	19.22	6	6.28	6	14.43	6	15.45	American	Green Star Line (S. B.)	400.0	54.0	25.0	Baltimore	Manila	General	5,020	6,528	4,706
Impoco	6	7.25	6	8.25	6	15.28	6	19.00	British	The Imperial Oil Co	249.0	43.0	16.6	New York	Talara	Ballast		2,341	1,598
West Mingo	6	9.00	6	9.20	6	17.18	6	18.20	American	Pacific Mail Steamship Co. (S.B.)	410.0	54.4	24.0	Norfolk	Tiburon	Coal	6,828	6,476	4,682
Apple Branch	6	7.02	6	10.32	6	17.25	6	18.27	British	F. & W. Ritson	370.0	52.0	23.7	Liverpool	Coronel	General	5,000	5,112	3,511
H. L. Bridges [2]			6	6.00	6	13.38			American	United States Army				Cristobal	Balboa				
Waimana	7	10.20	7	6.17	7	13.44	7	14.48	British	Shaw, Saville & Albion Co	476.6	63.0	25.0	Southampton	Wellington	Ballast		11,229	8,252
Trewinnard	7	2.05	7	6.52	7	15.04	7	16.50	British	Hain Steamship Co	471.0	60.9	26.0	Cardiff	Auckland	Coal	8,814		
Windber	7	9.05	7	9.33	7	17.01	7	18.58	American	Pacific and American Fisheries	290.0	40.0	21.0	New York	Los Angeles	Steel, general	3,017	3,036	2,126
Neches [3]	7	14.09	7	14.25	7	21.07			American	United States Navy	477.0	55.0	26.0	Port Arthur	Balboa	Fuel oil	7,860		
Harald	7	23.50	8	7.05	8	15.17	8	17.45	Danish	United Steamship Co	280.0	40.0	19.0	Baltimore	Guayaquil	Coal	2,347	2,149	1,492
Toba Maru	8	7.00	8	7.25	8	14.56	8	16.12	Japanese	Nippon Yusen Kabushiki Kaisha	415.0	58.0	24.0	New York	Yokohama	General	7,770	8,058	5,743
Lompoc	7	9.50	8	10.10	8	17.30	8	18.35	British	C. T. Bowring & Co	435.0	55.9	26.6	Tampico	Taltal	Fuel oil	9,600	7,496	5,311
Cauca	4	17.47	8	11.15	8	17.59	8	18.53	British	Pacific Steam Navigation Co	246.0	35.0	14.0	Cristobal	Guayaquil	General	213	1,582	1,023
Eastern Prince	8	11.53	8	12.15	8	19.58	9	1.55	British	Prince Line, Ltd	469.0	58.0	24.0	New York	Yokohama	General	6,111	8,413	5,971
Hoyeisan Maru	8	10.47	8	12.50	8	21.06	8	22.44	Japanese	Mitsui Bussan Kaisha	407.0	50.0	27.0	New York	Shanghai	General	6,651	6,189	4,440
Sea sled No. 16			8	6.30	8	9.36			American	United States Navy				Cristobal	Gatun Lake				
San Jose	3	13.40	9	6.05	9	13.24	9	23.21	American	Pacific Mail Steamship Co	283.0	37.0	16.6	Cristobal	San Francisco	General	820	2,352	1,602
Harold Dollar	8	14.24	9	6.15	9	14.00	9	15.15	British	Dollar Steamship Line	376.5	52.2	24.4	New York	Shanghai	General	6,044	5,224	3,934
Ardmore	8	15.40	9	6.26	9	16.37	9	19.21	American	Standard Oil Co	449.6	50.1	25.6	Tampico	Pisagua	Fuel oil	10,000	8,636	6,321
Barge No. 95	9	6.50	9	8.10	9	18.15	10	16.35	American	Standard Oil Co	360.0	50.0	21.0	Tampico	San Francisco	Crude naphtha	5,605	4,238	3,689
Floridian	9	5.30	9	8.40	9	15.49	9	16.50	American	United American Steamship Line	415.0	54.0	18.6	New York	Los Angeles	General	2,000	7,215	5,152
Richmond	9	6.50	9	9.15	9	17.11	10	16.35	American	Standard Oil Co	419.0	54.0	27.0	Tampico	San Francisco	Crude naphtha	7,500	6,706	4,640
Whakatane	9	12.05	9	12.20	9	19.45	9	21.05	British	New Zealand Shipping Co	420.0	54.0	30.0	London	Auckland	General	8,210	7,131	5,324
Falstria [4]	9	11.40	10	6.07	10	14.11	10	22.30	Danish	East Asiatic Steamship Co	365.0	50.0	15.6	Copenhagen	Guayaquil	General	3,981	4,799	3,484
Melania	9	17.08	10	6.12	10	14.55	10	16.10	British	Anglo-Saxon Petroleum Co	412.0	53.3	26.2	New Orleans	Shanghai	Kerosene	7,628	6,093	4,452
Irtysh	10	6.28	10	7.25	10	16.09	10	23.58	Russian	Russian Volunteer Fleet	375.0	55.0	22.6	Newport News	Caldera	Coal	5,037	5,476	3,940
Keosanqua [5]	4	6.53	10	11.03	11	12.30	11	14.10	American	United States Navy				Norfolk	Honolulu				
Sciota [6]			10	8.30	10	15.50	11	22.19	American	United States Navy				Cristobal	Balboa				
Knight Companion	10	19.25	11	6.20	11	14.17	11	15.14	British	Ocean Steamship Co	470.4	58.0	28.0	New York	Yokohama	General	9,533	8,546	6,263
Leitrim	11	6.25	11	7.20	11	15.19	11	16.45	British	Union S. S. Co. of New Zealand	470.0	60.0	28.0	New York	Lyttleton	General	7,500	10,050	6,834
Shabonee	11	5.30	11	7.45	11	16.05	11	15.15	British	Standard Oil Co	380.0	50.0	26.0	Tampico	Itosaki	Oil	6,315	5,255	3,717
Suez Maru	11	6.12	11	10.10	11	17.40	11	18.40	Japanese	Kokusai Kisen Kabushiki Kaisha	360.0	57.0	21.0	Matanzas	Hongkong	Sugar	4,750	4,684	3,440
Gen. H. F. Hodges	9	7.25	11	11.26	11	18.21	12	1.00	American	Panama Railroad Steamship Line	373.0	39.0	16.9	New York	Guayaquil	General	723	3,013	1,574

[2] Yacht. [3] Launch. [3] Collier-tanker. [4] Motor ship. [5] And barges *Nos. 477* and *478*. [6] Tug.

Acajutla	7	14.00	12	6.11	12	13.22	12	17.00	British	Pacific Steam Navigation Co.	215.0	33.0	13.6	Cartagena	Tumaco	General	243	1,273	706
Westmoreland	11	15.39	12	6.29	12	14.27	12	23.49	American	Barber Steamship Line	395.5	55.0	26.8	New York	Shanghai	Case oil	8,058	7,285	5,256
Petroleo [2]			12	6.40	12	14.43	12	14.23	American	West India Oil Co	44.0			Cristobal	Balboa				
Trontolite	11	20.05	12	6.55	12	15.53	13	19.45	American	Standard Oil Co	419.0	57.0	27.0	Tuxpan	Vancouver	Oil	8,700	7,345	5,429
Salvador	7	13.28	12	6.58	12	14.48	12	16.12	British	Pacific Steam Navigation Co.	215.0	33.0	13.4	Cristobal	Champerico	General		1,213	692
Mantaro	4	18.40	12	10.55	12	17.10	12	21.05	Peruvian	Peruvian Steamship Line	361.0	46.0	19.6	Cristobal	Callao	General		4,838	2,959
Doonholm	12	10.43	12	11.02	12	18.45	12	11.20	British	Wirral Transportation Co.	385.0	49.0	22.4	Cardiff	Lyttleton	Coal	5,543		

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Arawa	5	19.30	6	7.29	6	15.00	7	7.08	British	Shaw, Saville & Albion Co.	459.5	60.5	26.0	Auckland	London	Frozen, general	7,000	10,036	7,504
Nankai Maru	6	5.00	6	9.00	6	17.13	6	19.25	Japanese	Meiji Kaiun Kaisha	400.0	49.2	26.0	Caleta Colosa	Cristobal [8]	Nitrate of soda	7,200	6,002	4,586
Nils	6	7.55	6	10.10	6	17.23	6	20.46	Norwegian	Mayer & Sandalen	265.0	42.1	13.0	Salaverry	Pt. Barrios	Sugar	500	2,117	1,404
Alsace	6	8.00	6	10.35	6	18.23	6	22.25	French	French Navigation Co.	400.3	52.4	26.0	Iquique	France	Nitrate of soda	7,067	5,879	4,156
Salvador	6	16.00	7	6.28	7	13.28	12	6.58	British	Pacific Steam Navigation Co.	225.0	35.4	13.6	Champerico	Cristobal	(9)	212	1,213	692
War Ghurka	7	8.00	7	9.02	7	18.25	8	6.10	British	Anglo-Saxon Petroleum Co.	400.0	52.3	25.7	San Francisco	St. Catherine	Lubricating oil	(13)		
Port Nicholson	7	8.15	7	9.29	7	19.26	7	22.00	British	Commonwealth and Dom. Line	481.2	62.3	26.6	Hobart	London	Frozen, general	8,800	10,821	8,048
Madawaska [7]	7	16.45	8	6.32	8	17.15	9	4.00	American	United States Government	508.2	33.3	24.0	San Francisco	New York	General	244	5,475	4,179
Kaweah	5	18.10	8	6.41	8	17.33	8	17.33	American	McAllister Bros., N. Y. (S. B.)	430.0	58.2		Balboa	New Orleans	Ballast		7,680	5,664
Treloske	7	16.47	8	6.45	8	18.30	8	18.30	British	Hain Steamship Co.	400.2	52.1	24.6	Tocopilla	Antwerp	Nitrate	7,154		
La Paz	7	21.05	8	7.01	8	20.49	9	6.39	British	Pacific Steam Navigation Co.	406.0	54.0	26.0	Caleta Buena	Antwerp	Nitrate	8,025		
Livingston Roe	7	18.45	8	7.49	8	19.05	8	20.45	American	Standard Oil Co.	462.4	60.2	17.6	San Francisco	New York	Ballast			
Sir Francis	2–22	12.01	8	6.00					American	Thomas Drake	37.1	11.6	3.0	Seattle	Atlantic Coast	Ballast		7	6
Pangani	8	9.45	8	11.15	8	21.20	9	7.00	British	Allied Commission	420.0	56.3	24.0	Melbourne	United King.	Wheat	6,936		
Neches	7	21.07	9	7.07	9	16.20	12	6.20	American	United States Navy	477.0	55.0		Balboa	Port Arthur	Ballast		5,620	4,124
Edward Luckenbach	8	16.00	9	7.56	9	17.06	9	17.06	American	Luckenbach Line	436.6	57.2	27.6	Puget Sound	New York	(10)	7,849	8,543	6,427
Advance	9	6.00	9	9.25	9	18.10	12	15.05	American	Panama Railroad Steamship Line	295.0	38.4	18.0	Guayaquil	New York	(11)	1,227	2,947	2,113
Annie Laurie [2]			9	6.30					American	Norbury, Grayson & Kyle	18.3	4.7		Balboa	Gatun Lake				
Cacique	9	14.35	10	6.32	10	14.54	10	16.53	American	W. R. Grace & Co.	394.2	52.3	27.0	Puntarenas	Norfolk	Nitrate	7,590	6,610	4,993
Haarlem	9	15.35	10	7.04	10	15.46	10	20.20	Dutch	Royal Dutch Steamship Co.	361.0	49.0	21.3	Corral	Rotterdam	(12)	5,290	4,759	3,660
Tabolsk	10	4.20	10	10.37	10	18.11	12	11.30	Russian	Russian Volunteer Fleet	286.0	40.6	12.5	Macao	Habana	General	187		
Cape Romain	10	12.20	10	14.02	10	20.48	10	20.48	American	Atl. Gulf & Pacific S. S. Corp.	376.4	52.3	23.0	San Francisco	Baltimore	General, lumber	4,752	5,142	3,568
Los Angeles	11	16.30	12	6.36	12	15.22	12	15.22	American	Union Oil Co. of California	435.0	56.0	19.0	Los Angeles	Puerto Lobos	Ballast		7,380	5,195
Peru	11	23.00	12	8.40	12	16.07	12	17.31	Danish	East Asiatic Co.	425.3	55.2	27.0	Portland	Avonmouth	Wheat	8,248	7,497	5,660

[7] Transport. [8] For orders. [9] Coffee, hides, and general. [10] Lumber, ties, and general. [11] Ivory nuts, cocoa, and coffee. [12] Nitrate, tin ore, and foodstuffs. [13] 50,000 barrels.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
March 6	Ulysses [14]	Panama Railroad Steamship Line	Norfolk.
March 7	Parismina	United Fruit Co	New Orleans.
March 9	Santa Leonora	United States Army	San Juan.
March 9	Eagle No. 4	United States Navy	High seas.
March 9	Achilles [15]	Panama Railroad Steamship Line	Norfolk.
March 10	Turrialba	United Fruit Co	Bocas del Toro.
March 10	La Navarre	French Line	San Nazaire and wayports

*DEPARTURES.

Date.	Vessel.	Line.	For—
March 6	Turrialba	United Fruit Co	Bocas del Toro.
March 8	Panama	Panama Railroad Steamship Line	New York via Haiti.
March 9	Parismina	United Fruit Co	New Orleans via Bocas del Toro and Habana.
March 10	Turrialba	United Fruit Co	New Orleans.
March 10	Santa Leonora	United States Army	New York.
March 10	Ulysses [14]	Panama Railroad Steamship Line	Norfolk.

[14] And barge *Mamei*. [15] And barge *Darien*. *Other than ships passing through the Canal.

(Continued on page 471, column 2.)

Deceased and Insane Employees.

The estates of the following deceased or insane employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

DECEASED.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Robert David	28596	Antigua	Summit	Mun. Eng. Div.	March 8, 1921.
Leonard Roberts	36421	Barbados	Panama	Mechanical Division	March 10, 1921.
Rufino Samaniego	54545	Panama	Monte Lirio	Cattle Industry	March 8, 1921.

INSANE.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of commitment.
Herbert Fairclough	38688	Jamaica	Cristobal	The Panama Canal	February 26, 1921.

Official Circulars.

Use of Gamboa-Vigia Telephone Line.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., February 12, 1921.

To all concerned—The Section of Meteorology and Hydrography, which pays for the maintenance of the Gamboa-Vigia telephone line, advises that their work is at times seriously interfered with owing to the line being used for extended calls by persons who are nonemployees of that section.

There is no objection to the use of this telephone by outside parties, when the necessity therefor arises, but in all such cases the conversation must not exceed five minutes in duration.

A continued abuse of this privilege will necessitate the issuance of instructions which will prevent the use of this line by any save employees of the Section of Meteorology and Hydrography.

JAY J. MORROW,
Acting Governor.

Estimates, Appropriations, Allotments, and Expenditures.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 8, 1921.

CIRCULAR NO. 642-3:

1. Attention has recently been called to a large number of cases in which expenditures have been made greatly in excess of amounts authorized for expenditure on approved work requests.

2. Circular No. 642-2 contains instructions with reference to the use of work requests and obtaining authority for expenditure of funds. All work requests must show an estimated amount which it is intended to expend, and when the work request is approved, the amount so estimated is authorized for expenditure, and no more. Should it develop later that the estimated amount is not sufficient to complete the work contemplated, request for additional funds must be made before the work proceeds.

3. Special allotments and work requests covering the expenditure of considerable sums are frequently only approved by the Governor on statements of the Auditor that funds are available, and in such cases it is essential that the expenditures be held within the amounts authorized, as usually no additional funds for such expenditures can be made available. In the past there has frequently been a surplus to cover such cases, but with increased expenses and the reduction in the appropriations for next year, this condition has changed and will no longer exist.

4. Heads of Departments and Divisions are, therefore, directed to see that estimates, when submitted, are reasonably correct, and that after authority is given to expend fixed amounts no expenditures in excess of such amounts are made without additional authority being first obtained. It should also be remembered that economy in expenditures is essential and if the work can be satisfactorily performed at a cost less than the amount of the allotment or authorization, such saving should be effected.

5. The above instructions are also applicable to work performed for individuals and companies, U. S. Army, U. S. Navy, etc., where a definite sum has been authorized, which must not be over-expended without additional authority.

JAY J. MORROW,
Acting Governor.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 10, 1921.

CIRCULAR NO. 282:

Effective March 11, 1921, Mr. J. H. Hearn is designated an accountable official of The Panama Canal, *vice* Mr. Alfred Bryan, and as such will account for all property in use by the Supply Department storehouse stock at the Balboa Heights storehouse.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
JAY J. MORROW,
Acting Governor.

Stations for Watchman's Clocks.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 7, 1921.

CIRCULAR NO. 281:

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective at once all surplus and unserviceable stations for watchman's clocks will be turned over to the instrument repair shop, Balboa, without charge.

Future orders for stations will be submitted to the Mechanical Division in the form of work requests which must be forwarded with the clocks on which the keys are to be used. The stations will be charged for in the same manner as other material manufactured on work requests.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
JAY J. MORROW,
Acting Governor.

Waiting List of Applicants Eligible for Employment.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 9, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

This office has on file an accumulation of applications from American ex-employees discharged on account of reduction of force, and from others qualified for clerical and various other duties, who should be considered in filling vacancies in your organizations. In some instances the applicants have civil service status, while others are entitled to preference in appointment on account of discharge from military or naval service.

It is desired, therefore, in order that due consideration may be given to qualified applicants who may be entitled to preference in employment, that no further appointments be made to clerical and allied positions paying over $80 a month without first consulting this office concerning the applicants on its waiting list, who are eligible for employment.

C. A. MCILVAINE,
Executive Secretary.

Single-Track Operation of Panama Railroad Between Pedro-Miguel and Panama.

PANAMA RAILROAD COMPANY,
OFFICE OF MASTER OF TRANSPORTATION,
BALBOA HEIGHTS, C. Z., March 8, 1921.

CIRCULAR No. 1760:

To all concerned—Effective 6 a. m., Monday, March 14, 1921, the northbound main between Pedro Miguel and Panama will be abandoned and southbound main will be used as single track between Pedro Miguel and Panama.

At the same time Pedro Miguel Cabin will be closed and the interlocking plant at Diablo discontinued.

Pedro Miguel station will be operated as a day train order office with train order signals located as follows:

Northbound signal (old automatic No. 4024) east side of track 290 feet north of station.

Southbound signal (old automatic No. 4035) west side of track 385 feet south of station.

That section of the northbound main between crossover at track span 40-11 and crossover at track span 40-17 will be designated as Pedro Miguel passing track.

That section of the northbound main between the present crossovers at Corozal will be designated as Corozal passing track.

Northbound trains on single track will be governed by automatic signals formerly used for trains on the old northbound track.

Effective with the above, time table Rule No. 14, governing movement of trains over gauntlet track through Miraflores tunnel, will be canceled. Train movements through the tunnel will be governed by signals No. 4187 southbound, and No. 4206 northbound. These signals will operate in three positions—STOP, CAUTION and PROCEED, and give information to the next signal in advance.

W. F. FOSTER,
Master of Transportation.

Approved:
S. W. HEALD,
Superintendent.

Sale of Equipment on Hand at the Old Power and Refrigerating Plant, Commissary Division, Cristobal.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., April 12, 1921, and then opened for the purchase of various ice machinery, electrical generators, pumps, etc., on hand at the old power and refrigerating plant, Commissary Division, Cristobal. Form of proposal may be had upon application to the office of the Chief Quartermaster, or the General Manager, Commissary Division. The Panama Canal reserves the right to reject any or all bids.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 469.

PORT OF CRISTOBAL—continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
March 10	Asian	Leyland Line	Liverpool and wayports.
March 11	Calamares	United Fruit Co.	New York via Habana and Jamaica.
March 9	Trophan	Anglo-Saxon Petroleum Co.	Curacao.
March 11	Sacramento	United States Navy	Almirante.
March 11	Gen. O. H. Ernst	Panama Railroad Steamship Line	New York via Haiti.
March 12	Colon	Panama Railroad Steamship Line	New York via Haiti.
March 12	San Mateo	United Fruit Co.	Port Limon.

PORT OF BALBOA

Date.	Vessel.	Line.	From—
March 11	Tacoma	United States Government	Progreso.
March 11	Dolphin	United States Government	Corinto.
March 12	Veraguas	National Navigation Co.	Taboga.
March 12	Denver	United States Navy	Corinto.

*DEPARTURES.

Date.	Vessel.	Line.	For—
March 11	Trophan	Anglo-Saxon Petroleum Co.	Tampico.
March 12	Calamares	United Fruit Co.	New York via Port Limon and Habana.
March 12	Asian	Leyland Line	New Orleans.
March 12	San Mateo	United Fruit Co.	Boston.
March 8	Tacoma	United States Navy	Sea.
March 8	Phillip	United States Navy	San Diego.
March 8	Aaron Ward	United States Navy	San Diego.
March 8	Wickes	United States Navy	San Diego.
March 8	Evans	United States Navy	San Diego.
March 8	Buchanan	United States Navy	San Diego.
March 8	Birmingham	United States Navy	San Diego.
March 8	Aysen	South American Steamship Co.	Valparaiso.
March 12	Veraguas	National Navigation Co.	Balboa and Panama.

Rainfall from February 1 to February 28, 1921, Inclusive.

STATIONS.	Maximum in 1 day.	Date.	Total.
Pacific section:	*Ins.*		*Ins.*
Balboa	2.95	2	3.14
Balboa Heights	2.22	2	2.37
Miraflores	.37	2	.76
Pedro Miguel	1.44	3	1 53
Rio Grande	.09	3	.35
Central section:			
[1] Culebra	.28	4	.84
[1] Camacho	.33	5	1.39
Empire	.42	4	1.58
Gamboa	2.57	3	5.39
[1] Juan Mina	.60	3	1.05
Alhajuela	1.00	3	1.79
[1] Vigia	1.09	4	2.22
[1] Darien	.55	12	1.85
Trinidad	.49	12	1.35
[1] Monte Lirio	.53	12	2.93
Atlantic section:			
Gatun	.53	20	2.74
[1] Brazos Brook	.48	20	2 60
Colon	.19	28	1 63
[1] Porto Bello	1.45	3	5.20

[1] Standard rain gauge—readings at 5 p. m. daily.
Automatic rain gauge at unstarred stations—values midnight to midnight.

February Rainfall for Three Years.

STATIONS.	INCHES. 1919	1920	1921	Station average.	Years of record.	Rainy days, 1921.
Pacific section:						
Balboa	0.06	T	3.14	0.69	22	4
Balboa Heights	T	T	2.37	.84	23	4
Miraflores	.....	.....	.76	.91	13	3
Pedro Miguel	T	.07	1.53	.69	14	5
Rio Grande	.02	.05	.35	.62	17	10
Central section:						
Culebra	.05	.10	.84	.63	31	8
Camacho	.21	.05	1.39	.82	15	11
Empire	.24	.05	1.58	.74	16	13
Gamboa	.21	.10	5.39	.95	36	14
Juan Mina	.04	.12	1.05	1.08	11	8
Alhajuela	.04	.15	1.79	.76	22	17
Vigia	.....	13	2.22	1.46	13	11
Frijoles	.52	.25	4.19	2.19	10	....
Trinidad	.34	.40	1.35	2.27	14	19
Monte Lirio	1.15	.71	2.93	2.93	14	19
Atlantic section:						
Gatun	.54	1.00	2.74	2.59	17	20
Brazos Brook	.70	.56	2 60	2.86	15	18
Colon	.36	.54	1.63	1.62	51	20
Porto Bello	1.53	1.61	5.20	3.54	10	24

COMMISSARY NOTES.

Closed for Inventory.

The retail commissaries will be closed for quarterly inventory all day Wednesday, March 30, and the morning of Thursday, March 31. The cold storage and grocery sections will be open Thursday afternoon at the regular hour and other departments as soon thereafter as check has been completed by the inspectors.

Mouth Wash.

Another new preparation manufactured by the Commissary Division is "BOCAS," an antiseptic mouth wash. The formula used has been approved by the Health Department. It is now being used by a number of the district dentists in the Canal Zone. "BOCAS" is sold for 30 cents per bottle.

Tennis Racket Claims.

The New York office has written that in future when tennis rackets are returned for claim, it will be necessary to state whether customers are regularly using a press, as otherwise complaints will not be considered. The commissaries carry racket presses and tennis players may obtain them at any commissary where tennis rackets are sold.

Easter Novelties.

Among the Easter novelties now on sale in the commissaries are varicolored little baskets in a number of sizes and shapes. The designs are all attractive and the prices are very low, ranging from 7 to 25 cents. There are toys a-plenty too; eggs and rabbits, of course, flying birds, roosters, chicks, ducks, etc. Easter cards and Easter favors are also to be had.

Steubenville Chinaware.

The Steubenville potteries have advised that chinaware ordered from them by the Commissary Division a long time ago will be shipped in the very near future, with the exception of two items. On these they are unable to make a definite promise by reason of the facts that their stock of decal which applies on one of their decorations is entirely exhausted and a supply of this material has to come from England.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Volume XIV. Balboa Heights, C. Z., March 23, 1921. No. 32.

Addition to Tariff No. 4.—Taking Sand and Gravel for Ballast.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., March 12, 1921.

To all concerned—The following is to be added to paragraph 9, Item 18, page 23 of Tariff No. 4, Schedule of Rates for Supplies and Services Furnished to Shipping and Allied Interests at the Panama Canal:

ITEM 18—STEVEDORING AND TRANSFERRING CARGO.

9 (*additional*). A vessel taking sand or gravel for ballast will be charged 25 cents per ton to cover switching of cars and use of pier, in addition to regular wharfage charges.

JAY J. MORROW,
Acting Governor, The Panama Canal.
Second Vice President, Panama Railroad Company.

(NOTE—The above addition will be included in Supplement No. 4 to Tariff No. 4, when this supplement is issued.)

Quarantine Regulations Governing U. S. Naval Vessels and Aircraft.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 11, 1921.

CIRCULAR No. 626-9:

By virtue of the authority contained in Executive Order of March 31, 1920, published as Panama Canal Circular No. 601-110, paragraph 73, of General Quarantine Instructions, published as Panama Canal Circular No. 626-6, is hereby amended by adding the following:

73-A. Vessels and aircraft of the United States Navy arriving at Canal ports from noninfected ports, may be granted pratique without quarantine inspection, under the following conditions:

(*a*) Provided that there is no quarantinable disease aboard and the medical officer of the ship so certifies, or,

(*b*) Provided that the commanding officer of the vessel or vessels requests such pratique of the Chief Quarantine Officer through the Captain of the Port by radio between the hours of 8 a. m. and 4 p. m., and states names of ports visited within the past 10 days and the health condition of his command. Such pratique will not be considered as granted until radio reply has been received by the said commanding officer from the Captain of the Port, as follows: "Pratique granted by Chief Quarantine Officer."

(*c*) And, provided further, that within 12 hours after the arrival of the vessel or vessels, including aircraft, to which pratique has been granted by radio, at a Canal port, there shall be filed with the Quarantine Officer of such port a certificate executed by the Senior Medical Officer and approved by the commanding officer of the vessel or vessels, setting forth the name or names of the vessel or vessels, the ports which they have visited within the past 10 days, their complement and their state of health.

JAY J. MORROW,
Acting Governor.

Price of Gasoline from Panama Canal Storehouses.

Among the prices of miscellaneous supplies, effective March 1, published in THE PANAMA CANAL RECORD of March 9, gasoline, motor grade, in drums, was quoted at 56 cents a gallon. The price is 65 cents a gallon, including the 25 per cent surcharge.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, March 19, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Maricopa	12	21.45	13	6.55	13	15.25	13	17.13	Norwegian	W. Wilhelmsen	425.0	52.0	28.0	Puerto Lobos	Antofagasta	Crude oil	9,000	6,996	5,108
Huanchaco	13	10.19	14	6.15	14	13.58	14	15.10	British	Pacific Steam Navigation Co.	391.0	50.0	23.0	Liverpool	Coronel	General	5,017	5,905	4,391
Imperoyal	13	15.43	14	6.25	14	14.10	14	15.20	British	Imperial Oil Co.	249.5	43.0	15.0	Halifax	Talara	Ballast		2,291	1,595
Yorba Linda	14	18.00	15	6.24	15	13.58	15	15.00	American	General Petroleum Co.	440.0	56.0	28.6	Tampico	Tocopilla	Crude oil	7,400	7,642	5,364
Statesman	14	14.58	15	6.34	15	14.05	15	15.15	British	Harrison Line	446.0	53.0	21.0	Liverpool	Los Angeles	General	2,900	6,361	4,592
Hague Maru	15	7.14	15	7.57	15	16.02	15	17.20	Japanese	Osaka Shosen Kaisha	407.0	50.8	17.3	New York	Yokohama	Machinery, gen.	1,154	6,202	4,507
Seine Maru	15	8.15	15	8.50	15	17.14	16	1.16	Japanese	Suzuki & Co.	425.0	53.0	29.0	Nuevitas	Yokohama	Sugar	8,890	7,164	5,415
Eldorado	15	18.38	16	6.23	16	14.05	16	15.10	American	Western Transport Co.	245.0	42.0	19.3	New Orleans	Los Angeles	General	2,053	2,439	1,671
Chiquimula [2]	14	7.25	16	6.38	16	15.47	16	16.55	American	Chiquimula Shipping Corp.	176.3	36.1	12.6	Philadelphia	La Union	R. R. supplies, etc	488	716	530
Tasmania	15	21.55	16	6.45	16	14.58	16	16.10	British	New Zealand Shipping Co.	482.2	62.7	28.0	Liverpool	Auckland	General	5,606	9,460	6,605
Cordelia	15	21.30	16	7.20	16	16.49	16	21.24	British	C. T. Bowring & Co.	420.3	54.0	27.0	Puerto Lobos	Los Angeles	Crude oil	9,000	6,690	4,963
La Habra	16	1.45	16	8.55	16	16.56			Norwegian	W. Wilhelmsen	424.8	57.0	26.2	Tampico	Balboa	Crude oil	9,600	7,053	5,085
Arawan II [2]	9	7.00	16	9.05	16	16.45	17	7.17	American	Chas. Longstruts	64.0	16.0	4.6	Kingston	San Diego	Ballast		61	41
Tofuku Maru	16	9.28	16	9.55	16	18.02	17	17.55	Japanese	Kokusai Kisen Kaisha	385.0	51.0	26.5	New York	Melbourne	Case oil	6,142	5,919	4,400
Otira	16	6.10	16	10.37	16	19.29	16	22.44	British	Shaw, Saville & Albion Co.	450.0	58.0	26.1	St. Johns	Sydney	General	5,900	8,154	5,309
Eastern Importer	16	10.45	16	11.10	16	19.39	16	20.59	American	Pacific Mail Steamship Co. (S. B.)	384.6	51.2	28.3	Norfolk	San Diego	Coal (Navy)	7,837	6,347	4,453
Santa Teresa	16	5.44	16	11.35	16	20.23	16	21.16	American	W. R. Grace & Co.	360.2	51.6	24.0	New York	Valparaiso	General	3,356	5,726	4,086
Canastota	16	7.24	16	13.20	16	21.58	17	5.00	British	Canastota Steamship Co.	405.0	52.3	24.6	New York	Sydney	Case oil, general	6,500	5,530	4,101
America [3]	14	15.15	16	6.00	16	8.35			American	J. H. Stilson				Cristobal	Gatun Lake	Ballast		7	6
Laura C. Hall [2]	15	15.55	17	6.12	17	14.10	18	10.40	British	Pacific Metals Corp.	82.0	25.6	10.0	Cristobal	Buenaventura	General, mach.	20	130	69
Port Pirie	16	19.14	17	6.35	17	13.38	17	14.45	British	Commonwealth and Dom. Line	470.0	58.4	23.1	London	Auckland	General	6,200	9,381	6,915
Katrina Luckenbach	16	10.48	17	7.40	17	16.20	17	17.25	American	Luckenbach Line	446.0	56.0	28.0	New York	San Francisco	General	7,500	8,508	6,179
Shrophsire	17	12.20	17	8.29	17	17.35	17	23.35	British	Federal Steam Navigation Co.	520.0	61.4	28.6	Liverpool	Wellington	General	6,685	12,275	8,918
Point Bonita	16	13.22	17	10.13	17	17.59	17	18.58	American	Pacific Mail Steamship Co.	289.0	44.0	27.2	Baltimore	San Francisco	General	2,843	2,895	1,993
O-15 [4]			17	8.04	17	18.47			American	United States Navy				Coco Solo	Balboa				
O-12 [4]			17	8.25	17	18.45			American	United States Navy				Coco Solo	Balboa				
Lages	14	7.15	18	6.15	18	14.10	18	15.30	Brazilian	Brazilian Government	421.9	55.3	26.0	Norfolk	Coquimbo	Coal	6,700	6,555	4,566
Caddo	17	16.27	18	6.21	18	14.40	19	14.45	American	Standard Oil Co.	414.5	55.2	29.0	Tuxpan	Vancouver	Crude oil	8,500	6,438	4,391
Sumatra Maru	18	1.50	18	7.13	18	15.35	18	16.35	Japanese	Osaka Shosen Kaisha	385.1	51.0	26.0	Galveston	Yokohama	General	3,378	5,909	4,416
Bradford	18	8.20	18	9.00	18	16.35	18	21.25	American	Standard Oil Co.	426.0	54.0	27.6	Tampico	Pisagua	Crude oil	8,000	7,318	5,458
Santa Paula	18	9.38	18	10.05	18	18.14	18	22.04	American	W. R. Grace & Co.	404.6	53.9	25.6	New York	Talcahuano	General	6,522	6,744	4,825
Helder	18	6.30	19	6.00	19	13.30	19	21.08	Dutch	Royal Netherlands W. I. Mail	359.0	49.8	13.3	Amsterdam	Corral	General	1,527	5,117	3,807
Seminole	18	14.37	19	6.10	19	14.30			American	Tampico Interocean Co. (S. B.)	400.0	54.0	27.6	Charleston	Coquimbo	Coal	7,698½		
Cristobal	19	6.43	19	7.35	19	15.45			American	Panama Railroad Steamship Line	489.0	60.0	29.0	Norfolk	Balboa	Coal	9,546½		

[1] Motor schooner. [2] Yacht. [3] Launch. [4] Submarine.

Benjamin Brewster	18	16.00	19	8.28	19	16.51	20	17.35	American	Standard Oil Co	411.6	53.4	26.3	Tampico	Pisagua	Crude oil	7,500	6,360	4,337
Coalinga	18	22.45	19	9.40	19	19.09	19	20.35	American	Union Oil Co	471.0	55.0	.....	Tampico	Los Angeles	Crude oil	.....	8,107	5,627
Bowes Castle	19	10.05	19	11.08	19	19.22	19	22.51	British	James Chambers & Co	418.5	56.1	24.0	New York	Manila	General mdse	4,646	6,675	4,698
Conshohocken	18	19.24	19	11.10	19	19.50	19	22.49	American	Williams Steamship Co. (S. B.)	435.0	57.0	20.4	Philadelphia	Vancouver	General	2,500	7,983	5,882
Quilpue	17	16.28	19	11.11	19	20.36	20	1.20	British	Pacific Steam Navigation Co	361.2	46.0	18.6	New York	Guayaquil	General	216	4,742	3,023
Saint Andre	18	4.00	19	13.05	19	20.46	19	21.35	French	Cie Gle. Transatlantique	397.9	50.3	16.6	Havre	Talcahuano	General	776	5,917	4,146
J. A. McKie [3]	.....	.....	19	8.30	19	10.29	.....	.....	American	United States Army	.....	.....	.....	Cristobal	Gatun Lake	.....	.....	.....	.....
Sciota [3]	16	18.20	19	10.50	19	17.00	.....	.....	American	United States Navy	.....	.....	.....	Cristobal	Balboa	.....	.....	.....	.....

[5] Tug.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

West Cayote	12	12.45	13	6.52	13	14.25	13	14.25	American	Williams-Dimond & Co. (S. B.)	410.5	54.3	24.8	San Francisco	Glasgow	General	6,142	6,567	4,899
Laurel Branch	12	23.30	13	7.50	13	15.50	13	19.10	British	Nautilus Steamship Co	360.0	46.0	.....	Puntarenas	Liverpool	Nitrate, general	5,234	4,182	3,033
Ebro	13	5.30	13	8.45	13	16.27	14	4.00	British	Pacific Steam Navigation Co	450.3	57.8	.....	Valparaiso	New York	General	1,963	9,089	6,215
Mason [6]	2-25	15.32	13	11.14	13	16.58	13	16.58	American	United States Navy	310.0	31.0	.....	Balboa	Guantanamo	.....	.....	.....	.....
Wangaratta	14	1.20	14	7.50	14	15.15	15	9.25	British	British India Steam Nav. Co	450.0	58.5	23.0	New Plymouth	Falmouth	Frozen beef	3,772	8,288	5,227
Collegian	14	5.30	14	8.07	14	16.06	14	16.40	British	F. & J. Harrison	455.4	56.2	25.7	Victoria	London	General	8,200	7,712	5,437
Point Lobos	13	13.35	14	9.17	14	17.08	14	23.22	American	Pacific Mail Steamship Co	289.0	44.1	18.6	San Francisco	Baltimore	(9)	2,196	2,895	1,967
Laura C. Hall [3]	14	13.20	15	6.28	15	15.55	17	6.12	British	Pacific Metals Transp. Co	82.0	25.6	10.0	Buenaventura	Cristobal	Coffee	70½	130	69
Oriana	14	15.20	15	6.30	15	14.00	16	6.13	British	Pacific Steam Navigation Co	465.7	56.2	26.2	Coronel	Liverpool	General	3,250	8,620	5,345
John Worthington	14	14.45	15	7.10	15	14.25	15	14.25	American	Standard Oil Co. of N. J.	464.4	60.2	20.0	Antofagasta	Tampico	Ballast	.....	8,491	6,096
Lehigh	14	19.00	15	7.35	15	15.40	15	15.40	American	N. Atl. & Western S. S. Co. (S.B.)	390.0	54.2	17.7	Seattle	Boston	Lumber, general	2,993	6,106	4,346
Eemdijk	15	16.30	16	6.30	16	19.10	16	20.30	Dutch	Holland-American Line	469.4	58.2	27.0	Seattle	London	General	8,950	8,514	6,066
S. V. Harkness	15	17.25	16	6.48	16	18.18	16	22.13	American	Standard Oil Co	419.4	57.2	19.0	Valparaiso	Tampico	Ballast	.....	7,443	5,545
Lorain	15	19.40	16	7.11	16	20.16	16	20.08	American	U. S. & Australian Lines (S. B.)	395.5	55.0	21.0	Melbourne	New York	(10)	5,120	7,289	5,256
Paparoa	15	18.40	16	7.39	16	21.10	17	1.45	British	New Zealand Shipping Co	430.0	54.2	24.0	Dunedin	London	General, frozen	3,351	8,174	6,092
Sciota [5]	14	1.15	16	8.41	16	18.20	19	10.50	American	United States Government	149.3	30.0	.....	Las Palmas	Cristobal	.....	.....	.....	.....
Manavi	15	22.00	16	10.07	16	19.40	.....	.....	British	Pacific Steam Navigation Co	216.0	35.1	12.0	Guayaquil	Cristobal	Produce	62	1,357	884
War Sepoy	16	9.15	16	12.35	16	21.54	17	7.28	British	British Admiralty	400.0	52.3	19.0	Tarakan	Beaumont	Ballast	.....	.....	.....
Willfaro	16	11.47	16	13.04	16	22.45	16	22.45	American	William Steamship Co	386.8	52.2	22.6	Vancouver	New York	General	4,600	5,680	4,162
Hector	16	11.59	16	13.26	16	0.30	17	20.40	Dutch	Royal Netherlands W. I. Mail	322.0	44.2	23.6	Antofagasta	Cristobal [8]	Nitrate	4,377	3,677	2,707
Gaelic Prince	16	20.15	17	6.17	17	15.04	17	15.20	British	Prince Line, Ltd	449.5	57.3	23.6	Iloilo	Boston	(11)	9,000	9,157	6,658
Quillota	16	15.15	17	6.40	17	15.48	18	6.15	British	Pacific Steam Navigation Co	361.4	46.2	18.0	Guayaquil	New York	General	1,123	4,768	2,956
Impoco	16	21.00	17	8.18	17	17.34	18	6.00	British	Imperial Oil Co., Ltd	249.5	43.1	20.0	Talara	Halifax	Gasoline	2,679	2,341	1,598
Lyons Maru	17	7.00	17	9.26	17	16.37	17	18.02	Japanese	Nippon Yusen Kaisha	445.0	58.0	17.6	Kobe	New York	General	4,202	.....	.....
Santa Elisa	17	14.45	17	15.12	17	21.44	17	23.05	American	Grace Line	360.3	51.7	25.1	Valparaiso	New York	(12)	3,976	5,957	4,325
City of Berkeley	10	12.05	18	6.40	18	14.20	18	14.35	American	Barber Steamship Co. (S. B.)	402.5	53.0	27.3	Manila	New York	(13)	2,680	6,524	4,741
C. D. Bryant	2-19	18.30	18	7.14	18	18.25	19	8.40	American	Alexandia Woodside	172.0	37.0	19.1	Callao	Port-of-Spain	Nitrate	1,310	.....	.....
Swift Star	17	18.15	18	7.43	18	15.22	.....	.....	American	Swiftsure Oil and Transp. Co	464.6	60.2	20.0	San Francisco	Tampico	Ballast	.....	.....	.....
Siam	17	13.10	18	8.29	18	16.12	18	19.53	Danish	East Asiatic Co	398.2	53.6	27.6	Vancouver	St. Nazaire	General	9,018	7,068	5,303
Balboa [5]	17	23.00	18	8.55	18	17.02	18	18.02	Swedish	Johnson Line	426.9	56.3	26.8	San Francisco	United King	General	6,640	.....	.....
Gold Star [3]	11	14.03	18	6.38	.....	.....	.....	.....	American	Panama Canal Lighthouse Div	110.0	20.0	.....	Balboa	Gatun	.....	.....	.....	.....
La Habra	16	16.56	19	7.06	19	17.45	19	17.45	Norwegian	W. Wilhelmsen	424.8	57.0	.....	Balboa	Tampico	Ballast	.....	7,053	5,085
Urubamba	19	3.25	19	8.06	19	18.40	.....	.....	Peruvian	Peruvian Steamship Co	381.2	41.1	18.0	Callao	Cristobal	(14)	1,947	4,803	2,951

[6] Destroyer. [8] For orders. [9] Beans, onions, dyewood, and coffee. [10] General and chrome ore. [11] General, rubber, hemp, oil, and coconuts. [12] Nitrate of soda and general. [13] Manganese ore and general cargo. [14] Copper, cotton, skins, etc. Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

MOVEMENTS OF OCEAN VESSELS—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC—continued.

Ship	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Barima	19	5.00	19	8.39	19	18.45	....	....	British	Royal Mail Steam Packet Co.	220.0	37.0	12.0	Champerico	Cristobal	Produce	533.46	1,551	918
Somerset	18	22.00	19	9.30	19	19.55	19	22.50	British	Federal Steam Navigation Co.	460.6	62.8	26.6	Melbourne	London	Frozen, general	7,150	9,943	7,530
Walter A. Luckenbach	19	12.55	19	12.25	19	20.19	19	20.19	American	Luckenbach Line	446.4	56.1	28.0	San Pedro	Boston	General	7,300	8,785	6,497

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
March 13	Atenas	United Fruit Co.	New Orleans and wayports.
March 14	Cartago	United Fruit Co.	New Orleans.
March 16	Atenas	United Fruit Co.	Bocas del Toro.
March 16	Sixaola	United Fruit Co.	New York via Kingston.
March 16	Segura	Royal Mail Steam Packet Co.	London and wayports.
March 16	Tivives	United Fruit Co.	Colombian ports.
March 17	Manuel Calvo	Spanish Line	Barcelona via wayports.
March 17	Hekla	Thore Steamship Co.	Cartagena.
March 17	Ancon	Panama Railroad Steamship Line	Norfolk.
March 18	Eagle No. 36	United States Navy	New Orleans.
March 18	Pastores	United Fruit Co.	New York via wayports.
March 19	Patuca	Elders & Fyffes Line	Port Limon.
March 19	Crijnssen	Royal Netherlands W. I. Mail	Amsterdam via wayports.
March 19	Ottar	J. C. Knudson	Puerto Colombia.

*DEPARTURES.

Date.	Vessel.	Line.	For—
March 13	Gen. O. H. Ernst	Panama Railroad Steamship Line	Puerto Colombia.
March 13	Achilles [15]	Panama Railroad Steamship Line	Norfolk.
March 13	Atenas	United Fruit Co.	Bocas del Toro.
March 14	La Navarre	French Line	Puerto Colombia.
March 16	Colon	Panama Railroad Steamship Line	New York via Haiti.
March 16	Atenas	United Fruit Co.	New Orleans.
March 17	Tivives	United Fruit Co.	New York via Kingston.
March 17	Sixaola	United Fruit Co.	New York via Colombia and Kingston.
March 17	Cartago	United Fruit Co.	New Orleans via Bocas del Toro and Habana.
March 18	Manuel Calvo	Spanish Line	Puerto Colombia.
March 19	Pastores	United Fruit Co.	New York via Port Limon and Habana.
March 19	Patuca	Elders & Fyffes Line	Kingston.
March 19	Hekla	Thore Steamship Co.	New York via wayports.

[15] And barge *Darien*.

PORT OF BALBOA.

March 15	Kiyo Maru	Toyo Kisen Kaisha	Hongkong.	March 17	Kiyo Maru	Toyo Kisen Kaisha	Valparaiso.

*Other than ships passing through the Canal.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending March 19, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Gen. O. H. Ernst	Panama Railroad Steamship Line	.....	March 13	.....	14
Huanchaco	Pacific Steam Navigation Co	March 13	March 14	130	32
Ebro	Pacific Steam Navigation Co	March 13	March 14	(1)	390
La Navarre	French Line	.....	March 14	.....	561
Point Lobos	Pacific Mail Steamship Co	March 14	March 14	259	70
Colon	Panama Railroad Steamship Line	.....	March 16	.....	1,781
Cartago	United Fruit Co	March 14	March 17	925	103
Laura C. Hall	Pacific Metals Corporation	March 15	March 17	68	26
Sixaola	United Fruit Co	March 16	March 17	500	168
Point Bonita	Pacific Mail Steamship Co	March 16	March 17	344	192
Atenas	United Fruit Co	March 16	March 16	4	1
Segura	Pacific Steam Navigation Co	March 16	.....	202	.....
Manavi	Pacific Steam Navigation Co	March 16	.....	40	.....
Ancon	Panama Railroad Steamship Line	March 17	.....	10,111	.....
Manuel Calvo	Spanish Line	March 17	March 18	10	185
Quillota	Pacific Steam Navigation Co	March 17	March 18	182	12
Quilpue	Pacific Steam Navigation Co	March 17	March 19	227	82
Helder	Royal Netherlands W. I. Mail	March 18	March 19	119	53
Saint Andre	French Line	March 18	March 19	215	(2)
Pastores	United Fruit Co	March 18	March 19	4	243
Patuca	Elders & Fyffes Line	March 19	March 19	25	[3]240
Urubamba	Peruvian Line	March 19	.....	1,947	.....
Barima	Pacific Steam Navigation Co	March 19	.....	530½	.....
Crynssen	Royal Netherlands W. I. Mail	March 19	.....	13	.....

[1] No cargo discharged. [2] No cargo laded. [3] Pounds.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending March 19, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Point Lobos	Pacific Mail Steamship Co	March 13	March 14	27	7
Laura C. Hall	Pacific Metals Corporation	March 14	March 15	3	.....
Kiyo Maru	Toyo Kisen Kaisha	March 15	March 16	799	.....
Manavi	Pacific Steam Navigation Co	March 15	March 16	22	.....
La Habra	W. Wilhelmsen	March 16	March 19	9,600	.....
Laura C. Hall	Pacific Metals Corporation	March 17	March 17	.....	60
Quillota	Pacific Steam Navigation Co	March 16	March 17	1	.....
Cristobal	Panama Railroad Steamship Line	March 19	.....	9,547	.....
Quilpue	Pacific Steam Navigation Co	March 19	March 19	.....	44
Barima	Pacific Steam Navigation Co	March 19	March 19	3	.....

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended March 19:

U. S. S. *Denver*, repairs to inertia governor of dynamo engine; U. S. S. *Satterlee*, miscellaneous C. & R. and engineering repairs; launch *Vacuum, Jr.*, general repairs; steamship *La Habra*, repairs to refrigerating machine; *City of Berkeley*, small miscellaneous repairs; U. S. S. *Dolphin*, straighten bent davit; barges *Nos. 132* and *138*, general repairs; barge *No. 201*, accident repairs; U. S. submarines *O–11*, *O–12*, *O–15*, and *O–16*, periodical overhaul; steamships *Steel Inventor*, repairs to hull; *Caribbean*, general repairs; bark *C. D. Bryant*, miscellaneous repairs to hull and boiler; launches *Grace*, miscellaneous engine and hull repairs; *Pilot*, general repairs; steamship *Trontolite*, temporary repairs to starboard bow; U. S. S. *Mason*, miscellaneous hull repairs and docking; steamships *Doonholm*, small miscellaneous repairs; *Falstria*, services of diver; tender *Perico*, docking, staging, cleaning and painting, and miscellaneous repairs; launch *Cone*, accident repairs to hull.

The following vessels were at the Cristobal shops for repairs during the week ended March 21:

Steamships *Allianca*, *Ulysses*, and *Ancon*, miscellaneous repairs and painting to engine, deck, and steward departments; U. S. S. Eagle *No. 31*, install ballast, clean and paint hull; schooner *Anthony Nichols*, repair keel, scrape and paint bottom, etc.; U. S. submarine *O–14*, renew battery and hull ventilation ducts, make and install new anchor shaft, etc.; steamships *Balboa*, refasten valve seats on circulating pump;

renew 2-inch sanitary line on port side, etc.; *Urubamba*, electric weld staybolts in starboard boiler, repair or renew one pad eye on shell plating, etc.; S. P. *No. 2235*, secure door on deck over galley and door on deck aft, manufacture and install wood deck on forecastle in place of steel deck, etc.; U. S. S. Eagle *No. 36*, repair reducing valve to steering engine, repair turbine fuel oil pump in fireroom, repair indicator on steering gear in pilot house, etc.; tug *Tavernilla*, rebore cylinders, make new rings, scrape valve chest, turn plungers, new bushes in glands, etc.; steamship *Cuba*, U. S. A. T. *St. Mihiel*, steamships *Quillota*, *Metapan*, *Pastores*, *Swift Star*, *St. Andre*, *Manavi*, *Tivives*, *Point Bonita*, U. S. S. *Sacramento*, dredge *No. 86*, minor repairs.

Examination for Appointment of Officers in the Army.

The Adjutant of the Panama Canal Department, United States Army, advises that an examination for appointment to commissions as first and second lieutenants in the various branches of the Army will be held on April 25, 1921, to fill 2,585 vacancies of more than 4,000 now existing. The following are essential facts about the examination; further information may be secured from Department Headquarters, Quarry Heights:

April 25 is the date of the final examination. Prior to it applicants will submit to preliminary examination. All examinations will be held on the Isthmus but final grading will be done in Washington.

Age at time of appointment must be between 21 and 30 years. At time of final examination each candidate must be (*a*) a warrant officer or enlisted man of the Regular Army having had not less than two years' service as such; (*b*) a member of the Officer's Reserve Corps or the enlisted Reserve Corps; (*c*) a member of the National Guard; (*d*) a graduate of a technical institution approved by the Secretary of War. Any civilian who passes the preliminary examination may enter class (*b*) or (*c*) and become eligible for final examination.

The preliminary examination is merely an inquiry into the physical, moral, and mental qualifications of the applicant, to determine whether he has the qualifications to justify his proceeding with the final examination.

In the final examination the elementary part embraces history, grammar, geometry, arithmetic, trigonometry, and physics. The advanced part consists of a large number of subjects, including mathematics, languages, literature, electricity, chemistry, law, and minor tactics. Examination is required in but three of the subjects of the advanced group, to be selected by the candidate.

The Prevention of Fly-breeding.

The Chief Health Officer authorizes the following:

In the Canal Zone, in spite of its all-the-year warmth, there is often not even one fly in a house. The scarcity of flies in the Canal Zone is the subject of frequent comment on the part of visitors.

The methods of getting rid of flies are based on the fundamental principle and practice of preventing their breeding. Streets and grounds are kept clean. Garbage cans are kept covered, garbage is collected daily, and the cans are cleaned with larvacide. In the stables manure is gathered quickly and dumped into compost pits, where heat and the chemical action of fermentation render the manure unsuitable for breeding. There are no old-fashioned privies in the towns, and in the field work, field closets are placed over deep pits, frequently treated with crude oil and larvacide. "Swatting the fly" is practiced through fly-paper and traps; but the fundamental idea is prevention at the source.

Such are the basic practices to prevent fly-breeding. They are possible only in a well-organized community, and at the price of continuous effort.

The detail to which this work must go is illustrated by this report, sent in by the district sanitary inspector at Balboa under date of March 10:

We have always had more or less flies at Balboa restaurant; our reports usually show "few," "very few," "decreasing," or "increasing." From time to time we find small breeding places, but have never felt satisfied that the real breeding places had been found until yesterday, when breeding was found in the inner parts of about 12 old grease-soaked corn brooms used for sweeping the floors, platform, and street at Balboa restaurant. In some of these brooms as many as 200 maggots were found, some puparia being found higher up in the dry parts. This has been reported to the chief steward, who will see that the brooms are steamed hereafter to prevent further breeding.

The importance of the prevention of flies lies not only in the removal of a pest, but also in greatly diminishing the danger of infection with typhoid fever, dysentery, and other diseases.

In keeping down the number of flies, as in the antimosquito and antirat work (which are aimed primarily at the prevention of yellow fever and malaria and bubonic plague, respectively) the Health Department counts on the intelligent and loyal cooperation of the residents of the Canal Zone. Especially in the work against flies and rats, cleanliness about the quarters is essential.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z. (telephone 286):

Accounting and statistical clerk (male and female); $1,500 to $2,100 a year; form 1312; age, 21 but not 50 years; vacancies exist in the Interstate Commerce Commission; March 23 and April 27, 1921.

Draftsman, architectural and structural steel (male and female); $1,560 to $1,800 a year; form 1312; announcement No. 154; age, 21 but not 45 years; vacancies exist in the Lighthouse Service, New Orleans, La., and Milwaukee, Wis.; April 12, 1921.[x]

Electrician, $840 to $2,000 a year; form 1800; general mechanic, $720 to $1,000 a year; forms 1800 and 2029; steam-electric engineer, first and second class, $1,000 to $1,200 a year; forms 1800 and 2351; third class steam engineer, $600 to $1,000 a year; forms 1800 and 2351 (male and female); announcement No. 231-amended; age, 20 but not 50 years; vacancies exist in the Departmental and Indian services; until further notice.

Grazing assistant, $1,200 to $1,800 a year (male and female); form 1312; age, 20 but not 50 years; vacancies exist in the Forest Service; April 13 and 14, 1921.

Junior wharf examiner (food and drugs), $1,200 a year (male and female); form 1312; age, 18 but not 45 years; vacancies exist in the Bureau of Chemistry, Department of Agriculture; April 13, 1921.

Medical interne (male and female); $1,200 a year; form 1312; announcement No. 638-amended; age, 20 but not 55 years; vacancies exist in Saint Elizabeth's Hospital, Washington, D. C.; July 1, 1921.[x]

Personal service officer, $1,800 to $2,400 a year; personal service assistant, $1,500 to $2,000 a year (male and female); form 1312; announcement No. 149; age, below 55 years; vacancies exist under the Federal Board for Vocational Education; April 13, 1921.

Pyrotechnic assistant, $1,872 a year (male and female); form 1312; announcement No. 153; age, 21 but not 55 years; vacancies exist at Picatinny Arsenal, Dover, N. J.; April 5, 1921.[x]

Superintendent and director, $1,800 a year (male and female); form 1312; announcement No. 155; age, within reasonable age limits; vacancies exist at Beaufort, N. C., Key West, Fla., in the Bureau of Fisheries; April 12, 1921.[x]

Veterinarian, $1,500 a year; lay inspector, $1,080 a year (male and female); forms 1312 and 304; announcement No. 532; age, 18 but not 45 years; vacancies exist in the Bureau of Animal Industry, Department of Agriculture; May 11, 1921; April 13, 1921.

No. 65-amended (supplemental); mechanical draftsman, $800 to $2,500 a year; closing date, March 15, 1921.

No. 231-amended; elevator conductor, $720 to $900 a year; closing date, March 15, 1921.

[x] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Karl Martin Archer...	37257	Barbados.....	Panama.....	Mechanical Division...	March 8, 1921.
William Benj. Jordan.	24144	Barbados.....	Silver City.....	Quartermaster Dept....	March 13, 1921.
Martinosa Rosa *alias* Martin Rosa.....	50180	Panama	Red Tank.....	Pacific Locks.....	March 15, 1921.
Joseph Thomas.....	27515	Antigua.....	Corozal Hospital	R. & F. Agency.....	March 13, 1921.
Jose Julio Ossa.....	46008	Panama.....	Panama.....	Mun. Eng. Div.....	March 1, 1921.
Charles McMurray...	41129	Jamaica.....	Red Tank.....	Pacific Locks.....	March 3, 1921.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to, "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Civil Service Examinations.

Clerk, optional subjects of typewriting, bookkeeping, accounting training and experience, general business training and experience, timekeeping training and experience; usual entrance salaries, $116.67 to $158.33 a month; Postal Clerk, usual entrance salary, $145.83 a month (male and female); form 1312; announcement No. 484-amended; age, 18 but not 45 years; vacancies exist in The Panama Canal Service, April 9, 1921.

Stenographer and typist (male and female); usual entrance salaries, $137.50 and $158.33 a month; form 1312; announcement No. 484-amended; age, 18 but not 45 years; vacancies exist in The Panama Canal Service; April 16, 1921.

Official Circulars.

Acting Executive Secretary—Acting Chief Clerk.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 16, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective this date, and during the absence of Mr. C. A. McIlvaine on leave, Mr. John H. Smith will be Acting Executive Secretary. Mr. Roger S. Erdman will be Acting Chief Clerk.

JAY J. MORROW,
Acting Governor.

Acting Superintendent, and Acting Master of Transportation, Panama Railroad.

PANAMA RAILROAD COMPANY,
OFFICE OF THE PRESIDENT,
BALBOA HEIGHTS, C. Z., March 18, 1921.

To all concerned—Effective to-day and during the absence of Mr. S. W. Heald, Mr. W. F. Foster will act as Superintendent, and Mr. W. J. Bissell will act as Master of Transportation.

JAY J. MORROW,
Second Vice President.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 15, 1921.

CIRCULAR NO. 285:

Effective March 16, 1921, Mr. John H. Smith is designated an accountable official of The Panama Canal, *vice* Mr. C. A. McIlvaine, and as such will account for all nonexpendable property in use by the Executive Secretary.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
JAY J. MORROW,
Acting Governor.

Sailing of the "Allianca."

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
BALBOA HEIGHTS, C. Z., March 15, 1921.

To all concerned—The steamship *Allianca* will sail from Cristobal for New York on Saturday, March 26, at 3 p. m.

S. W. HEALD,
Superintendent.

Good Friday Train Schedule.

PANAMA RAILROAD COMPANY,
OFFICE OF MASTER OF TRANSPORTATION,
BALBOA HEIGHTS, C. Z., March 16, 1921.

CIRCULAR NO. 1766:

All concerned—Account of Friday, March 25, being a legal holiday, the Panama Railroad Company will operate regular Saturday schedule Thursday, March 24, and regular Sunday schedule Friday, March 25, on main line.

Local freights will not run on Friday, March 25.

W. F. FOSTER,
Master of Transportation.

Approved:
S. W. HEALD,
Superintendent.

Sailing of the "Cristobal."

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
BALBOA HEIGHTS, C. Z., March 23, 1921.

All concerned—The steamship *Cristobal* with Congressional party will sail from Cristobal for Norfolk via Kingston, Jamaica, and Guantanamo, Cuba, at 10 p. m., Friday, March 25.

Special train with Congressional party to connect with steamer will leave Panama for Cristobal at 8.30 p. m., Friday, March 25.

W. F. FOSTER,
Acting Superintendent.

Additions to Commissary Stock.

Dry Goods Section.

Dress goods, silk, pongee, 33/4", yd.....	$1.60
Suiting, silk, pongee, 27/8", yd.....	3.10

COMMISSARY NOTES.

Closed for Inventory.

The retail commissaries will be closed for quarterly inventory all day Wednesday, March 30, and the morning of Thursday, March 31. The cold storage and grocery sections will be open Thursday afternoon at the regular hour and other departments as soon thereafter as check has been completed by the inspectors.

Shoe Sale.

In line with current market reductions in the United States, the commissaries on Tuesday, March 22, reduced the price of all shoes selling for more than $13 per pair. Cuts of from $2.25 to $4.65 per pair have been made and approximately 1,900 pairs of the higher-priced stock are included in the sale.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Volume XIV. Balboa Heights, C. Z., March 30, 1921. No. 33.

CANAL WORK IN FEBRUARY.

The following is the report of the Acting Governor to the Secretary of War, of Canal work in the month of February, 1921:

BALBOA HEIGHTS, C. Z., March 22, 1921.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of The Panama Canal for the month of February, 1921:

CANAL TRAFFIC.

The total number of vessels and craft of all kinds through the Canal as compared with the preceding month, and of the corresponding month of last year, was as follows:

	February, 1921.	January, 1921.	February, 1920.
Commercial vessels	241	279	208
United States Government vessels	94	75	21
Launches (under 10 tons)	3	4	.....
Total vessels and craft	338	358	229

COMMERCIAL TRAFFIC.

A comparison of this month's commercial traffic with that of the preceding month, of the corresponding month of 1920, and of the average month's traffic for the past 12 months, shows the following:

Panama Canal net tonnage:	
February, 1921	916,838
January, 1921	1,094,323
February, 1920	703,462
Average, past 12 months	910,036
Registered gross tonnage:	
February, 1921	1,179,979
January, 1921	1,383,778
February, 1920	915,404
Average, past 12 months	1,163,101
Registered net tonnage:	
February, 1921	752,022
January, 1921	883,362
February, 1920	579,842
Average, past 12 months	740,149
Tolls earned:	
February, 1921	$917,412.49
January, 1921	1,095,857.46
February, 1920	703,884.86
Average, past 12 months	903,166.05
Tons of cargo carried:	
February, 1921	952,904
January, 1921	1,177,053
February, 1920	780,488
Average, past 12 months	974,246

Ocean-going commercial vessels passing through the Canal averaged 8.6 ships per day. The average tonnage, tolls, and tons of cargo carried, per commercial vessel, as compared with last month's traffic, were as follows:

Average per vessel.	This month.	Last month.
United States equivalent net tonnage	3,170	3,207
Panama Canal net tonnage	3,804	3,922
Registered gross tonnage	4,896	4,960
Registered net tonnage	3,126	3,166
Tolls	$3,806.69	$3,927.80
Tons of cargo (all vessels)	3,954	3,859
Tons of cargo (laden vessels only)	4,495	4,635

TOLLS PAID PER CARGO TON BY NATIONALITY OF VESSELS.

The average rate of tolls paid on each ton (2,240 pounds) of cargo passing through the Canal from the Atlantic to the Pacific was $0.94, and from the Pacific to the Atlantic was $0.97 with a general average of $0.96. The average rate paid per ton of cargo by vessels of various nationalities, is shown in the following tabulation:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
British	$1.05	$1.02	$1.04
Chilean	1.70	4.15	2.31
Costa Rican	(1)	.76	1.23
Danish	.66	.68	.66
Dutch	3.18	.55	1.12
French	1.32	.....	1.32
Italian	4.16	41.73	5.61
Japanese	.80	.84	.81
Norwegian	.69	.81	.76
Panaman	.74	.....	.74
Peruvian	2.05	.....	2.05
Spanish	.....	.56	.56
Swedish	.58	.55	.56
United States	.90	1.05	1.00
Total	.94	.97	.96

[1] Tolls paid but no cargo carried southbound. Ship in ballast.

In the computation of the average rate of tolls paid per ton of cargo through the Canal, as shown in table above, tolls paid on warships, yachts, and other non-cargo-carrying vessels have been eliminated, but tolls paid on cargo-carrying ships passing through the Canal in ballast have been included. The difference in the rate of tolls paid per cargo ton by ships of various nationalities is due to the fact that some vessels pass through the Canal in ballast, others but partially loaded, while others are carrying capacity cargoes.

COMMODITY STATISTICS.

A classification of all cargo passing through the Canal, by commodities, giving the amount of each commodity and the origin and destination of same, has been previously-compiled, and was published in THE PANAMA CANAL RECORD under date of March 16, 1921. A brief summary of the principal items is given herewith:

CARGO PASSING FROM ATLANTIC TO PACIFIC.

Commodity.	Tons.	Per cent of total cargo.		
			This month	Last month
Oils:				
Crude	105,069	22	35	28
Refined	61,680	13		
Coal and coke	90,276	.....	19	20
Manufactured goods:				
Iron and steel	48,914	10	16	15
Railroad equipment	12,678	3		
Machinery	4,544	1		
Other	7,730	2		
Sulphur	15,414	.....	3	2
Sugar	11,360	.....	2	1
Cement	9,731	.....	2	1

CARGO PASSING FROM PACIFIC TO ATLANTIC.

Nitrate	191,928	40	32
Wheat	79,201	17	10
Lumber	36,518	8	9
Oils	30,585	6	7
Refined (21,322 tons).			
Coconut (8,150 tons).			
Vegetable (1,113 tons).			
Sugar	13,818	3	3
Barley	12,687	3	4
Flour	12,316	3	1
Metals	9,540	2	2
Copper (8,677 tons).			
Others (863 tons).			
Ores, various	5,546	1	4
Wool	5,977	1	2

UNITED STATES COASTWISE TRAFFIC.

Included in the February traffic were 32 vessels engaged in the United States coastwise trade, combining an aggregate Panama Canal net tonnage of 146,983, and carrying 135,647 tons of cargo. Of these vessels, 15 passed from the Atlantic to the Pacific, with a total Panama Canal net tonnage of 80,940, and carrying 67,302 tons of cargo; and 17 passed from the Pacific to the Atlantic, with a total Panama Canal net tonnage of 66,043, and carrying 68,345 tons of cargo.

UNITED STATES SHIPPING BOARD VESSELS.

Twenty-eight vessels under control of the United States Shipping Board passed through the Canal during the month, combining a total Panama Canal net tonnage of 137,465, and cargo of 143,303 tons. The tolls on these vessels aggregated $137,033.76. Of the above vessels, 8 were southbound, with a total Panama Canal net tonnage of 41,024, and carrying 35,018 tons of cargo; and 20 were northbound, with a total Panama Canal net tonnage of 96,441, and carrying 108,285 tons of cargo. Of the northbound vessels, 3 were in ballast.

TRADE ROUTES.

Statements attached to this report show the origin and destination of all cargo passing through the Canal as nearly as the same can be segregated from the data available (*see* pages 498 and 499). Below is given a summary of the traffic passing over the principal trade routes, showing the number of vessels, their Panama Canal net measurement, and the amount of cargo carried.

	Total vessels.			Vessels in ballast.	
	Number.	Panama Canal net tonnage.	Cargo.	Number.	Panama Canal net tonnage.
Atlantic to Pacific.					
East coast of United States to west coast of South America	26	88,942	105,339	1	4,156
East coast of United States to Far East	15	66,958	93,193	.....	.....
United States coastwise	15	80,940	67,302	.....	.....
Europe to west coast of South America	9	39,660	22,552	.....	.....
Cristobal, C. Z., to west coast of South America	9	12,704	3,249	2	1,234
East coast of United States to Australasia	6	25,631	39,406	.....	.....
Mexico to west coast of South America	5	27,598	46,128	.....	.....
Europe to Australasia	4	24,850	17,342	.....	.....
Mexico to west coast of United States	4	19,786	35,525	.....	.....
Cristobal, C. Z., to west coast of Central America	4	2,384	1,411	1	152
Europe to west coast of United States	2	11,022	2,400	.....	.....
West Indies to Australasia	3	7,875	11,360	1	700
Cristobal, C. Z., to west coast of United States	2	2,986	3,756	.....	.....
Other trade routes	10	23,897	24,909	2	4,245
Totals	114	435,233	474,872	7	10,487
Totals for January, 1921	134	517,719	557,158	12	44,859
Totals for February, 1920	99	360,502	302,610	30	85,701
Pacific to Atlantic.					
West coast of South America to Europe	20	88,139	112,397	.....	.....
United States coastwise	17	66,043	68,345	2	6,483
West coast of South America to east coast of United States	17	55,590	62,259	1	5,400
West coast of United States to Europe	13	62,475	93,417	.....	.....
West coast of South America to Cristobal	11	13,477	4,308	.....	.....
West coast of South America to east coast of Mexico	7	34,770	230	6	32,333
West coast of United States to east coast of Mexico	6	28,804	1,200	5	23,440
West coast of South America to Azore Islands[1]	6	19,977	38,667	.....	.....
Australasia to Europe	5	24,710	23,771	.....	.....
Far East to east coast of United States	4	20,893	24,098	.....	.....
West coast of Central America to Cristobal	4	2,384	742	.....	.....
Australasia to east coast of United States	2	9,906	3,122	.....	.....
Other trade routes	15	54,437	45,476	4	22,047
Totals	127	481,605	478,032	18	89,703
Totals for January, 1921	145	576,604	619,895	19	79,243
Totals for February 1920	109	342,960	477,878	5	23,404

[1] For orders.

Of the 18 ships in ballast from the Pacific to the Atlantic, 16 were empty oil tankers returning to Mexican and United States Gulf ports. Vessels shown as in ballast represent cargo-carrying ships only; warships, tugs, etc., not being included.

LATIN-AMERICAN TRAFFIC.

The number of vessels, tonnage, and tons of cargo carried by vessels engaged in the Latin-American trade, classified by nationality, are as follows:

ATLANTIC TO PACIFIC.

Nationality.	No. of vessels	Tonnage.				Tolls.	Cargo.
		United States equivalent.	Panama Canal net.	Registered gross.	Registered net.		
United States	20	64,509	76,473	98,575	63,099	$79,851.81	104,859
British	22	46,081	58,538	76,164	45,988	57,213.88	50,571
Norwegian	6	15,749	18,730	24,142	15,347	19,266.30	31,472
Japanese	4	13,757	15,902	20,880	13,612	17,016.65	25,352
French	4	12,636	14,159	19,417	12,253	14,108.77	10,721
Danish	3	10,999	11,445	13,821	10,694	13,345.35	20,182
Italian	2	8,211	9,574	13,810	8,452	10,235.80	2,460
Chilean	2	2,296	3,634	4,655	2,815	2,806.15	1,650
Dutch	1	3,320	5,466	5,248	3,262	4,150.00	2,465
Peruvian	1	1,506	2,951	4,744	2,673	1,882.50	917
Panaman	1	940	930	1,141	916	1,116.00	1,500
Costa Rican	1	144	152	158	93	109.44	.....
Totals	67	180,148	217,954	282,755	179,204	$221,102.65	252,149
January, 1921	75	181,708	224,467	285,838	177,278	.....	266,102
February, 1920	62	.....	170,010	224,906	141,418	.....	81,075

PACIFIC TO ATLANTIC.

British	33	87,210	108,244	146,971	87,683	$103,652.37	98,924
United States	26	84,185	100,147	128,915	83,215	86,038.31	56,951
Norwegian	9	27,100	30,599	39,936	24,647	29,809.11	35,505
Spanish	5	12,722	15,342	18,698	12,109	15,802.80	28,055
Japanese	2	7,795	8,705	11,340	7,663	9,549.70	15,774
Italian	1	3,339	4,266	5,860	3,486	4,173.75	100
Dutch	1	2,012	3,120	3,209	1,989	2,515.00	4,650
Chilean	1	1,811	3,182	3,798	2,272	2,263.75	546
Costa Rican	1	144	152	158	93	180.00	235
Danish	1	1,788	1,795	2,028	1,188	2,154.00	3,160
Totals	80	228,106	275,552	360,913	224,345	256,138.79	243,900
January, 1921	87	225,140	275,457	357,515	224,698	.....	270,263
February, 1920	73	.....	201,975	267,186	168,330	.....	307,321

Statements attached to this report (*see* pages 498, 499) show the origin of all cargo destined for Latin-America, and the destination of all cargo originating in Latin-America.

CLASSIFICATION OF COMMERCIAL TRAFFIC.

A statement of this month's traffic, classified according to the nationality of the various ships passing through the Canal, is shown in the following tabulations:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Number and nationality of commercial vessels through the Panama Canal:			
British	37	43	80
Chilean	2	1	3
Costa Rican	1	1	2
Danish	3	1	4
Dutch	2	2	4
French	4	.....	4
Italian	2	1	3
Japanese	10	3	13
Norwegian	8	10	18
Panaman	1	.....	1
Peruvian	1	.....	1
Russian	.....	1	1
Spanish	.....	5	5
Swedish	1	1	2
United States	42	58	100
Totals	114	127	241
Totals for January, 1921	134	145	279
Totals for February, 1920	99	109	208

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
United States equivalent net tonnage of commercial vessels passing through the Canal, by nationality:			
British	98,032	129,070	227,102
Chilean	2,296	1,811	4,107
Costa Rican	144	144	288
Danish	10,999	1,788	12,787
Dutch	8,180	5,025	13,205
French	12,636	.....	12,636
Italian	8,211	3,339	11,550
Japanese	36,812	12,158	48,970
Norwegian	20,554	30,153	50,707
Panaman	940	.....	940
Peruvian	1,506	.....	1,506
Russian	.....	1,471	1,471
Spanish	.....	12,722	12,722
Swedish	2,563	3,411	5,974
United States	159,554	200,406	359,960
Totals	362,427	401,498	763,925
Totals for January, 1921	423,206	471,483	894,689
Totals for February, 1920	305,856	280,251	586,107
Panama Canal net tonnage of commercial ships passing through the Canal, by nationality:			
British	119,197	156,348	275,545
Chilean	3,634	3,182	6,816
Costa Rican	152	152	304
Danish	11,445	1,795	13,240
Dutch	11,534	6,976	18,510
French	14,159	.....	14,159
Italian	9,574	4,266	13,840
Japanese	41,678	13,121	54,799
Norwegian	25,770	34,485	60,255
Panaman	930	.....	930
Peruvian	2,951	.....	2,951
Russian	.....	1,580	1,580
Spanish	.....	15,342	15,342
Swedish	2,807	5,661	8,468
United States	191,402	238,697	430,099
Totals	435,233	481,605	916,838
Totals for January, 1921	517,719	576,604	1,094,323
Totals for February, 1920	360,502	342,960	703,462
Registered gross tonnage of commercial ships passing through the Canal, by nationality:			
British	152,056	208,912	360,968
Chilean	4,655	3,798	8,453
Costa Rican	158	158	316
Danish	13,821	2,028	15,849
Dutch	12,899	7,960	20,859
French	19,417	.....	19,417
Italian	13,810	5,860	19,670
Japanese	55,339	17,203	72,542
Norwegian	31,701	44,830	76,531
Panaman	1,141	.....	1,141
Peruvian	4,744	.....	4,744
Russian	.....	2,679	2,679
Spanish	.....	18,698	18,698
Swedish	4,126	5,642	9,768
United States	242,931	305,413	548,344
Totals	556,798	623,181	1,179,979
Totals for January, 1921	649,877	733,901	1,383,778
Totals for February, 1920	471,757	443,647	915,404
Registered net tonnage of commercial ships passing through the Canal, by nationality:			
British	94,808	127,488	222,296
Chilean	2,815	2,272	5,087
Costa Rican	93	93	186
Danish	10,694	1,188	11,882
Dutch	8,058	4,953	13,011
French	12,253	.....	12,253
Italian	8,452	3,486	11,938
Japanese	36,345	11,930	48,275
Norwegian	20,071	27,701	47,772
Panaman	916	.....	916
Peruvian	2,673	.....	2,673

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Registered net tonnage of commercial ships passing through the Canal, by nationality—Continued.			
Russian	.....	1,334	1,334
Spanish	.....	12,109	12,109
Swedish	2,958	4,320	7,278
United States	154,828	200,184	355,012
Totals	354,964	397,058	752,022
Totals for January, 1921	411,827	471,535	883,362
Totals for February, 1920	301,140	278,702	579,842
Tolls levied against commercial vessels passing through the Canal, by nationality:			
British	$124,847.73	$155,532.27	$280,380.00
Chilean	2,806.15	2,263.75	5,069.90
Costa Rican	109.44	180.00	289.44
Danish	13,345.35	2,154.00	15,499.35
Dutch	10,225.00	6,281.25	16,506.25
French	14,108.77	.....	14,108.77
Italian	10,235.80	4,173.75	14,409.55
Japanese	45,454.35	14,848.90	60,303.25
Norwegian	25,188.54	33,625.36	58,813.90
Panaman	1,116.00	.....	1,116.00
Peruvian	1,882.50	.....	1,882.50
Russian	.....	1,838.75	1,838.75
Spanish	.....	15,802.80	15,802.80
Swedish	3,203.75	4,263.75	7,467.50
United States	197,093.21	226,831.62	423,924.83
Totals	449,616.59	467,796.20	917,412.79
Totals for January, 1921	535,824.31	560,033.15	1,095,857.46
Totals for February, 1920	353,609.28	342,164.33	695,773.61
Tons of cargo carried through the Canal by commercial vessels by nationality:			
British	116,318	152,112	268,430
Chilean	1,650	546	2,196
Costa Rican	.....	235	235
Danish	20,182	3,160	23,342
Dutch	3,215	11,458	14,673
French	10,721	.....	10,721
Italian	2,460	100	2,560
Japanese	56,479	17,652	74,131
Norwegian	36,322	41,505	77,827
Panaman	1,500	.....	1,500
Peruvian	917	.....	917
Spanish	.....	28,055	28,055
Swedish	5,563	7,730	13,293
United States	219,545	215,479	435,024
Totals	474,872	478,032	952,904
Totals for January, 1921	557,158	619,895	1,117,053
Totals for February, 1920	302,610	477,878	780,488

A further summary of the commercial traffic, classified according to type of vessels, and segregating laden and unladen ships, is given herewith:

	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Cargo-carrying ships:			
Laden	104	107	211
Ballast	7	18	25
Other vessels:			
Passenger ship	.....	1	1
Warships	3	.....	3
Yacht	.....	1	1
Total	114	117	241
Panama Canal net tonnage of above:			
Cargo-carrying ships—			
Laden	424,746	390,292	815,038
Ballast	10,487	89,703	100,190
Other vessels—			
Passenger ship	.....	1,580	1,580
Warships (displacement tonnage)	6,251	.....	6,251
Yacht	.....	30	30
Total, other than displacement	435,233	481,605	916,838

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Tolls levied on above:			
Cargo-carrying ships—			
Laden	$438,939.40	$400,795.80	$839,735.20
Ballast	7,551.39	65,139.15	72,690.54
Other vessels—			
Passenger ship	.....	1,838.75	1,838.75
Warships	3,125.50	.....	3,125.50
Yacht	.....	22.50	22.50
Totals	449,616.29	467,796.20	917.412.49
A further classification of above cargo-carrying vessels:			
Steamships	106	119	225
Motor ships	4	5	9
Sailing vessels	1	1	2
Totals	111	125	236
Panama Canal net tonnage of above:			
Steamships	422,033	475,705	897,738
Motor ships	12,300	3,623	15,923
Sailing vessels	900	666	1,566
Totals	435,233	479,994	915,227
Cargo carried by above vessels ... tons	474,872	478,032	952,904
Tolls levied, cargo ships only	[1] $446,490.79	[1] $465,934.95	[1] $912,425.74
Average tolls per ton of cargo	.94	.97	.96

[1] Includes cargo-carrying ships in ballast.

CLASSIFICATION OF NONCOMMERCIAL TRAFFIC.

The following traffic passed through the Canal free of tolls during the month of February, 1921:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
United States Navy vessels:			
Battleships	.....	7	7
Cruiser	.....	1	1
Destroyers	4	20	24
Colliers	2	7	9
Mine sweepers	11	10	21
Eagle boats	2	2	4
Submarines	2	.....	2
Hospital ship	.....	1	1
Repair ship	.....	1	1
Supply ship	.....	1	1
Destroyer tender	.....	1	1
Seaplane tenders	1	1	2
Mine layers	1	1	2
Tugs	4	7	11
Total Navy vessels	27	60	87
United States Army vessels:			
Tug	.....	1	1
Launch	.....	1	1
Total Army vessels	.....	2	2
Commercial vessels with supplies for United States Navy	5	.....	5
Total vessels through Canal free of tolls	32	62	94
Tonnage of above vessels:			
United States Navy vessels (displacement)	66,395	386,672	453,067
United States Army vessels (displacement)	.....	173	173
Commercial vessels with supplies for United States Navy (Panama Canal net)	22,963	.....	22,963
Cargo carried by above vessels:			
United States Navy ships ... tons	7,277	1,800	9,077
Commercial ships with navy supplies ... tons	42,711	.....	42,711
Total cargo free of tolls	49,988	1,800	51,788

STATEMENT OF OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal are shown in the following tabulation:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Vessels passing through the Canal:			
Commercial ships	114	127	241
United States Government ships	32	62	94
Launches and miscellaneous craft	2	1	3
Total ships transiting the Canal	148	190	338
Tonnage of above ships:			
Commercial (Panama Canal net)	435,233	481,605	916,838
Government:			
Displacement	66,395	386,845	453,240
Panama Canal net	22,963	.....	22,963
Launches, etc. (Panama Canal net)	11	1	12
Cargo carried by above vessels:			
Commercial ships ....tons..	474,872	478,032	952,904
Government ships ....tons..	49,988	1,800	51,788
Total cargo through Canal ....tons..	524,860	479,832	1,004,692
Deck cargo included in above ....tons..	283	1,368	1,651
Vessels entering port but not transiting Canal:			
Number entering	58	48	106
Number clearing	54	47	101
Registered gross tonnage of above:			
Entering	303,324	349,218	652,542
Clearing	282,415	355,138	637,553
Registered net tonnage of above:			
Entering	194,780	344,678	539,458
Clearing	180,675	350,045	530,720
Vessels transiting Canal and handling passengers or cargo at port:			
Number entering	43	49	92
Number clearing	42	50	92
Registered net tonnage of above:			
Entering	119,392	121,791	241,183
Clearing	113,980	126,177	240,157
Registered gross tonnage of above:			
Entering	199,868	202,608	402,476
Clearing	191,043	208,693	399,736
All vessels entering and clearing at Canal ports, including those transiting the Canal:			
Number entered	361	345	706
Number cleared	358	345	703
Registered net tonnage of above:			
Entering	1,349,448	1,297,883	2,647,331
Clearing	1,328,254	1,312,046	2,640,300
Registered gross tonnage of above:			
Entering	1,904,927	1,760,180	3,665,107
Clearing	1,867,655	1,773,069	3,640,724
Transit cargo arriving ....tons..	1,015,406	1,005,051	2,020,457
Transit cargo clearing ....tons..	1,001,516	1,013,081	2,014,597
Local cargo arriving ....tons..	33,063	22,711	55,774
Local cargo shipped ....tons..	2,509	287	2,796
Cargo received for transshipment ....tons..	15,127	25	15,152
Cargo transshipped ....tons..	22,472	42	22,514
Cargo handled by Receiving and Forwarding Agency, Panama Railroad:			
Received ....tons..	36,686	2,069	38,755
Dispatched ....tons..	22,897	1,949	24,846
Rehandled ....tons..	3,167	131	3,298
Stevedored (included in above) ....tons..	25,597	78	25,675
Vessels supplied with bunker coal:			
Commercial vessels, other than Panama Railroad	72	16	88
Panama Railroad vessels	5	.....	5
United States Army vessels	4	1	5
Total vessels	81	17	98
Coal supplied to above vessels:			
Commercial, other than Panama Railroad ....tons..	27,911	1,913	29,824
Panama Railroad vessels ....tons..	1,006	.....	1,006
United States Army vessels ....tons..	110	43	153
Total coal supplied to vessels ....tons..	29,027	1,956	30,983
Coal issues, miscellaneous:			
Panama Railroad departments ....tons..	430	7	437
Panama Canal departments ....tons..	1,121	576	1,697
United States Army, excepting vessels ....tons..	152	.....	152
Individuals and companies ....tons..	661	.....	661
Total coal furnished from Panama Canal deposits ....tons..	31,391	2,539	33,930

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Coal on hand March 1, 1921 ... tons	163,565	5,455	169,020
Coal on hand, February 1, 1921 ... tons	85,392	7,994	93,386
Coal received during February ... tons	109,564	.....	109,564
Coal, United States Navy account:			
Issued to United States Navy, including vessels ... tons	3,064	25,742	28,806
Coal on hand, March 1, 1921 ... tons	54,672	10,027	64,699
Coal on hand, February 1, 1921 ... tons	54,972	35,769	90,741
Coal received during February ... tons	2,764	.....	2,764
Vessels supplied with fuel oil from Panama Canal tanks:			
Panama Railroad vessel	1	.....	1
Fuel oil supplied above vessel ... bbls	2,370	.....	2,370
Fuel oil issues, miscellaneous:			
To Panama Canal departments ... bbls	6,789	19,527	26,316
To Panama Railroad departments ... bbls	784	.....	784
To Army and Navy ... bbls	204	.....	204
To individuals and companies ... bbls	.....	1,294	1,294
Total issues from Panama Canal tanks ... bbls	10,147	20,821	30,968
Fuel oil on hand, March 1, 1921 ... bbls	129,154	93,074	222,228
Fuel oil on hand, February 1, 1921 ... bbls	139,301	113,895	253,196
Fuel and Diesel oil pumped for individuals and companies at 4 cents per barrel ... bbls	213,039	311,364	524,403
Diesel oil on hand March 1, 1921 ... bbls	53,366	1,051	54,417
Vessels furnished with commissary supplies:			
Commercial	155	75	230
Panama Railroad vessels	15	1	16
United States Government vessels	30	94	124
Total vessels furnished supplies	200	170	370
Commissary sales to commercial vessels:			
Ice	$2,302.50	$619.95	$2,922.45
Wholesale groceries	6,299.62	3,051.80	9,351.42
Wholesale cold storage	28,675.63	14,614.92	43,290.55
Laundry	2,401.11	290.31	2,691.42
Miscellaneous	2,613.93	1,816.66	4,430.59
Total	42,292.79	20,393.64	62,686.43
Commissary sales to Panama Railroad vessels:			
Ice	$172.80	$44.40	$217.20
Wholesale groceries	359.18	330.15	689.33
Wholesale cold storage	5,353.47	1,007.27	5,360.74
Laundry	2,151.51	.....	2,151.51
Miscellaneous	681.25	7.56	688.81
Total	8,718.21	1,389.38	9,107.59
Commissary sales to Government vessels:			
Ice	$319.11	$2,317.41	$2,636.52
Wholesale groceries	1,802.31	11,612.80	13,415.11
Wholesale cold storage	10,287.40	79,192.21	89,479.61
Laundry	580.98	2,272.51	2,853.49
Miscellaneous	1,364.70	19,229.71	20,594.41
Total	14,354.50	114,624.64	128,978.14
Total commissary sales to all vessels:			
Month of February, 1921	$65,365.50	$136,407.66	$201,773.16
Month of January, 1921	89,984.01	99,067.16	189,051.17
Month of February, 1920	124,426.52	42,046.88	166,473.40
Admeasurement certificates:			
United States equivalent issued or made	8	29	37
Measured for Panama Canal	10	24	34
United States equivalent or Panama Canal corrected	14	26	40
Services of harbor equipment:			
Tugs, total operating hours	1,333	768	2,101
Launches, total operating hours	1,870	1,846	3,716
Number of vessels supplied with water	196	234	430
Water supplied to above ... gals	11,221,575	9,143,750	20,365,325
Vessels repaired at Panama Canal shops	68	50	118
Vessels dry-docked	2	10	12
Services to American vessels:			
Crews shipped	2	.....	2
Crews paid off	2	.....	2
Shipping articles written	2	.....	2

	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Services to American vessels—Continued:			
Marine notes of protest noted	12	7	19
Bills of health issued	186	170	356
Clearances issued	178	127	305
Articles opened	.....	3	3
Articles closed	.....	2	2
Services to American seamen:			
Seamen shipped	211	152	363
Seamen paid off	193	171	364
Seamen deserted	15	14	29
Seamen deceased	1	1	2
Seamen lodged and subsisted	13	11	24
Seamen repatriated	12	3	15
Wages of American seamen:			
Total amount of wages earned	$17,806.41	$41,385.32	$59,191.73
Deductions approved by Deputy Shipping Commissioner	7,776.59	20,238.97	28,015.56
Balance due seamen	$10,029.82	$21,146.35	$31,176.17
Paid to seamen	5,754.41	18,489.68	24,244.09
Received on deposit for seamen	4,275.41	2,656.67	6,932.08
Movement of passengers.			
Disembarking at Canal ports:			
First class—			
From Atlantic ports	1,298	2	1,300
From Pacific ports	116	150	266
Total, first class	1,414	152	1,566
Other than first class—			
From Atlantic ports	1,130	.....	1,130
From Pacific ports	47	114	161
Total, other than first class	1,177	114	1,291
Total disembarking at Canal ports	2,591	266	2,857
Embarking from Canal ports:			
First class—			
For Atlantic ports	971	.....	971
For Pacific ports	191	154	345
Total, first class	1,162	154	1,316
Other than first class—			
For Atlantic ports	746	.....	746
For Pacific ports	75	143	218
Total, other than first class	821	143	964
Total embarking from Canal ports	1,983	297	2,280
Remaining on board vessels:			
First class—			
Bound from Atlantic to Pacific ports	1,039	1,011	2,050
Bound from Pacific to Atlantic ports	365	472	837
Bound from Atlantic to Atlantic ports	724	.....	724
Bound from Pacific to Pacific ports	.....	25	25
Total, first class	2,128	1,508	3,636
Other than first class—			
Bound from Atlantic to Pacific ports	838	723	1,561
Bound from Pacific to Atlantic ports	831	874	1,705
Bound from Atlantic to Atlantic ports	46	.....	46
Bound from Pacific to Pacific ports	.....	344	344
Total, other than first class	1,715	1,941	3,656
Total remaining on board	3,843	3,449	7,292
Total passengers arriving	6,434	3,715	10,149
Total passengers departing	5,826	3,746	9,572
Arrivals in excess of departures	608	.....	.....
Departures in excess of arrivals	.....	31	.....
Net excess of arrivals	.....	.....	577

LOCK OPERATION.

The following tabulations give the number of lockages, vessels through the locks, and the consumption of water for lockages, for the month of February, 1921:

LOCKAGES—COMMERCIAL VESSELS ONLY.

	Number of lockages.			Number of vessels.		
	North.	South.	Total.	North.	South.	Total.
Gatun	116	106	222	130	120	250
Pedro Miguel	124	117	241	127	121	248
Miraflores	122	115	237	128	121	249
Total	362	338	700	385	362	747

TOTAL LOCKAGES AND VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Lockages.			
Commercial	222	241	237
Noncommercial, Army and Navy	34	54	50
Noncommercial, Canal equipment	2	30	21
Totals for February, 1921	258	325	308
Totals for preceding month	313	334	328
Totals for February, 1920	199	219	216
Vessels through locks.			
Commercial	250	248	249
Noncommercial, Army and Navy	102	109	108
Noncommercial, Canal equipment	19	62	51
Totals for February, 1921	371	419	408
Totals for preceding month	392	413	389
Totals for February, 1920	263	318	305

CONSUMPTION OF WATER FOR LOCKAGES, LOSS IN LEAKAGES, ETC.

	Gatun.	Pedro Miguel.	Miraflores.
	Cubic feet.	*Cubic feet.*	*Cubic feet.*
Lockages	1,005,310,000	978,410,000	902,550,000
Leakage	25,000,000	12,200,000	59,000,000
Maintenance	.....	3,960,000	3,690,000
Total consumption, February, 1921	1,030,310,000	994,570,000	965,240,000
Total preceding month	1,252,860,000	1,219,650,000	1,048,270,000
Total, February, 1920	803,620,000	736,620,000	690,930,000

METEOROLOGY AND HYDROGRAPHY.

The rainfall for the month was above the average at all stations, with the exceptions of Miraflores, Rio Grande, Juan Mina, Trinidad, Brazos Brook, and Chilibrillo; the total precipitation ranged from 0.27 inch at Cocoli to 5.39 inches at Gamboa. The greatest amount of rainfall recorded on any one day was 2.95 inches at Balboa on the 2d.

The estimated rainfall over Gatun Lake watershed was 3.04 inches, compared with a 11-year mean of 1.93 inches, and over the Chagres River basin above Alhajuela it was 2.97 inches, compared with a 20-year mean of 1.70 inches.

The discharge of the Chagres River at Alhajuela was 911 c. f. s., being 27 per cent below the February mean of 1,253 c. f. s., and furnished 52 per cent of the Gatun Lake total yield. The maximum momentary discharge for the month was 1,820 c. f. s. at elevation 92.02 feet on the 14th, and the minimum flow was 640 c. f. s. on the 26th and 27th.

The Gatun Lake watershed total yield was 1,767 c. f. s., being 9 per cent below the 11-year February mean of 1,936 c. f. s. The maximum total yield for February was 5,077 c. f. s. in 1915, while the minimum total yield was 705 c. f. s. in 1920. The net yield for the month was 951 c. f. s., which is 19 per cent below the 11-year February average of 1,169 c. f. s. The lake varied in elevation from 86.19 feet on the 1st to 85.29 feet on the 28th; averaged 85.77 feet and ended at 85.30 feet midnight, the 28th. A decrease in storage of 3,900,000,000 cubic feet occurred during the month, compared with 6,100,000,000 cubic feet for February, 1920.

The draft on the lake for lockages and power was 2,503 c. f. s., compared with 2,506 c. f. s., for last month, and 2,055 for February, 1920. The ratio of water used for power and lockages was 2 to 1.

Miraflores Lake varied from a maximum elevation of 54.16 feet on the 23d, to a minimum elevation of 53.30 feet on several dates, averaged 53.74 feet, and ended at 53.92 feet midnight of the 28th.

Four seismic disturbances were recorded during the month, occurring on the 4th, 5th, 11th, and 27th, respectively. All were of slight intensity, and none of them were felt by the inhabitants of the Canal Zone. The tremors of the 4th and 27th indicate a rather distant origin, and those of the 5th and 11th appear to have been local.

ELECTRICAL DIVISION.

The combined gross output of the Gatun hydroelectric station for February was 5,941,900 KWH, on a computed water consumption of 4,006,074,000 cubic feet. The combined gross output of the Miraflores steam plant was 30,610 KWH, with an oil consumption of 2,101 barrels. This latter plant was operated for stand-by purposes only.

The total gross output of both stations was 5,972,510 KWH. The total loss in power in plant auxiliaries, transmission and transformation, was 937,758 KWH, or 15.70 per cent of gross output.

Miscellaneous repairs and installations of electrical equipment were made on 57 vessels during the month, 23 at Cristobal, and 34 at Balboa. The work of converting the signal system between Panama and Pedro Miguel for single-track operation was started during the month. The interlocking plant at Balboa Heights has been removed in connection with the conversion of the signal system.

The following work was under progress during the month, with completion on February 28, as shown:

	Per cent completed.
Installation of 4 K-5 switches at Miraflores substation	[1] 75
Installation of two 1,000-ampere, K-12 switches at Cristobal substation	[1] 85
Installation of new 8,400 KVA transformer and new tie-line equipment in Gatun substation	[1] 63
Installation of 2 complete feeder equipments at the Balboa substation	[1] 95
Extension of underground distribution in New Cristobal	50

[1] Indicates that no work was done during the month.

SHOP, FOUNDRY, AND DRY DOCK WORK.

The latter part of the month was marked by the return visit of the combined Atlantic and Pacific fleets. Miscellaneous repairs were made on a number of vessels from the fleets, and the torpedo boats *Wickes* and *Mugford* were each docked on very short notice at the Balboa shops. The torpedo destroyers *Mason* and *Satterlee*, damaged in collision, were placed in the dry dock for repairs, near the end of the month.

The rebuilding of the tug *Bohio* was completed during the month and the vessel turned over to the Dredging Division. The hull of this tug was largely rebuilt, the machinery overhauled, new decks laid, quarters renovated, fuel oil tanks installed in place of coal bunkers, and the vessel fitted for oil burning.

The rebuilding of the bow of the steamship *Sussex* was completed. This involved renewal of the stem and about 35 plates, renewal or splicing of frames and rebuilding the forward portion of the ship.

During the month of January, the steamship *North American* was placed in dry dock at the Cristobal shops to ascertain the extent of damages that occurred when the ship struck bottom off the coast of Ecuador while bound north with a cargo of ore. The following repairs were made during February as a result of this grounding: The stem bar was cut away at scarph, disconnected at keel, faired, replaced and welded at scarph. Eighteen plates on the port side from keel plate to "E" strake and 13 plates on the starboard side from "A" strake to "E" strake were renewed, faired, and replaced. Forty-five frames on the port side and 33 frames on the starboard side were cropped and spliced. The starboard bilge keel was renewed and the port bilge keel partly renewed. Five plates were renewed on tank top in No. 1 hold. The lower half of collision bulkhead was renewed. The hull was faired and members renewed in various other parts of the vessel as required. The engine and shafting were lined up and auxiliaries repaired, piping was renewed or repaired as required and various miscellaneous repairs were made throughout the vessel.

Other repair work at the Cristobal shops included the following: The engine, compressor, and ice machine of the steamship *Morristown* were realigned; the steering engine and ballast pump of the steamship *Peru* were overhauled; a new valve in copper oil pipe was furnished and installed on the steamship *Europa* and tubes in the forward boiler were rolled and punched. The dynamo turbine engine of the steamship *Hayti* were repaired and the blower engine cylinder was rebored.

In addition to the above, miscellaneous repairs were made to 47 vessels at Balboa and 64 vessels at Cristobal. Ten vessels were dry-docked at Balboa during the month, and 2 at Cristobal.

A new landing float was constructed at the Balboa plant at the head of uncompleted dry dock No. 2, to facilitate repairs to small boats.

The output of the Mechanical Division in patterns and castings, as compared with the preceding month, was as follows:

	January.			February.		
	Patterns.	Castings.	Pounds.	Patterns.	Castings.	Pounds.
Iron	34	862	45,932	32	859	38,909
Steel	28	1,476	63,600	6	425	87,527
Brass	28	2,505	14,851	12	1,851	31,940

The routine inspection, hostling, and repair of equipment for the Panama Railroad Company was carried on during the month. Nine hundred and eighty-one job orders were completed during the month, with 581 remaining uncompleted on February 28.

The decline in marine repair work at the Mechanical Division shops continues, as well as the lessening in work turned over by other departments. Between January 1 and March 1, there has been a 10 per cent reduction in the gold hourly force of the Mechanical Division.

BUILDING CONSTRUCTION.

The following statement represents the degree of completion on February 28 of the more important work under construction by the Building Division:

	Per cent completed.
Silver townsite, Mount Hope:	
Thirty 12-family married quarters	100
Eight 12-family married quarters	99
Two 12-family married quarters	95
Ten 32-room bachelor quarters	99
Royal Mail Steam Packet Company's office, Cristobal	85
Applying Specification roofing to Pier No. 6, Cristobal	90
Painting silver quarters, Gatun	100
Reroofing Cristobal bakery	95
Repairs to 35 houses, Cristobal	65
Four hundred and sixty-eight kitchenettes for silver townsite, Cristobal	[1] 50
Roof between buildings 2 and 3, Balboa	70
Roof between buildings 3 and 4, Balboa	80
Moving 2 type-18 houses from Las Cascadas to Cristobal	55
Moving 2 type-14 houses from Las Cascadas to Balboa	100
All-America Cable Company building, Cristobal	55
Manufacture of 300 wooden rocking chairs	18
Erection of boiler, cold storage plant, Cristobal	10
Repairs to Paraiso clubhouse	80
Repair and paint Balboa clubhouse	35
Construction of asbestos roof, Balboa ice plant	20
Two transformer houses, New Cristobal	45
Rebuild ovens at Cristobal bakery	70

[1] Indicates that no work was done during the month.

Construction work for the Army and Navy is separately reported.

DREDGING DIVISION.

Cucaracha Slide showed no movement during the entire month. One dipper dredge worked in the basin in front of this slide, removing 30,000 cubic yards of material, and making a total of 2,366,400 cubic yards removed since the slide of February 22, 1920. There was no interference of any kind with Canal traffic during the month. Culebra and Barge Repair slides showed very little movement during the month.

The total excavation for February, including earth, rock, and run-of-bank gravel and sand was 540,082 cubic yards, as follows:

Cubic yards.	Classified as—		Character of work.	Stations.	Equipment
	Earth.	Rock.			
				Atlantic entrance.	
232,300	232,300	.....	Maintenance	232-00 to 212-80 W. 270-00 to 236-50 E	*No. 86.*
				Gaillard Cut.[1]	
40,100	35,100	5,000	Maintenance	1740-00 to 1746-00 W	*Paraiso.*
				Gaillard Cut.[2]	
8,600	7,700	900	Maintenance	1609-00 to 1612-50	*Paraiso.*
				Gaillard Cut.[3]	
8,600	7,600	1,000	Maintenance	1630-00 to 1635-00 E	*Paraiso.*
				Gaillard Cut.[4]	
30,000	1,500	28,500	Maintenance	1805-00 to 1814-00 E	*Paraiso.*

[1] Barge repair slide. [2] Whitehouse slide. [3] Powder house slide. [4] Cucaracha slide.

Cubic yards.	Classified as— Earth.	Rock.	Character of work.	Stations.	Equipment
				Miraflores Lake.	
126,600	116,200	10,400	Maintenance.....	1966–00 to 1953–20 W. 1984–00 to 1966–00 E.....	*No. 83.*
				Pacific entrance.	
12,000	12,000	.....	Maintenance.....	2205–00 to 2183–00 W.....	*Cascadas.*
7,000	2,000	5,000	Construction.....	2205–00 to 2183–80 W.....	*Cascadas.*
				Balboa inner harbor.	
14,700	13,200	1,500	Construction.....	Docks 13–16.....	*Cascadas.*
18,000	18,000	.....	Maintenance.....	Docks 13–16.....	*Cascadas.*
				Chagres River.	
1,600	1,600	.....	Aux. construction..	Gravel dock, Gamboa.....	*Marmot.*
11,200	11,200	.....	Aux. construction..	Channel to gravel beds.....	*Marmot.*
29,382	29,382	.....	Aux. construction..	Sand excavation.....	*Marmot.*
540,082	487,782	52,300			

The material excavated at the various stations was disposed of as follows:

	Cubic yards.
West side of the Canal, Atlantic entrance	90,300
East side of Canal prism, at Mindi	142,000
North of Gamboa	87,125
East and west sides of Canal prism, Miraflores Lake	126,600
Sea dumps, Pacific entrance	51,700
Deep water, Chagres River	12,800
Towed to Gamboa	29,382
North of Gold Hill	175
Total	540,082

On March 1, 1921, the following excavation remained to be done:

Location.	Earth.	Rock.	Total.
	Cu. yds.	*Cu. yds.*	*Cu. yds.*
Gaillard Cut	.....	25,000	25,000
Pacific entrance	45,000	75,900	120,900
Total, Canal prism	45,000	100,900	145,900
Balboa inner harbor	62,250	6,500	68,750
Total, ocean to ocean	107,250	107,400	214,650

MUNICIPAL ENGINEERING DIVISION.

The total output of all pumping stations for the month of February was 794,342,250 gallons; and that of the 3 filtration plants 484,624,000 gallons. The consumption of water in Panama City was 84,209,000 gallons, and that for Colon 57,771,750 gallons. Sales of water to 430 vessels totaled 20,365,325 gallons.

Construction work, as itemized below, was under progress during the month, with completion on February 28, as follows:

Northern District.

	Per cent completed.
Municipal work, New Cristobal townsite:	
Grading	[1] 55
Roads	[1] 97.5
Water lines	[1] 72
Sidewalks	[1] 86
Sanitary sewers	100
Grading, block No. 53, Colon	[1] 50
Installation of 12-inch oil line to dock No. 14	85
Laying of two 12-inch oil lines to Pier 6	15
Laying of 6-inch Diesel oil line to Dock 6	20
Widening road, Mount Hope pumping station	80
Relaying 10-inch water line to coaling plant	15

Southern District.

Municipal work for 4 type-14 houses, Quarry Heights	100
Storm sewer, Javillo Fill	[1] 99
Box sewer, Panama Railroad yards	[1] 99
Concreting streets, New Santo Tomas Hospital	[1] 98
Reconstruction of road, Quarry Heights	[1] 95
Water and sewer connections to Shrine building, Quarry Heights	92
Box sewer on 13th Street, Panama	[1] 99
New wash-water tank, Miraflores	[1] 95
Construction of concrete sea wall, new Santo Tomas Hospital	10
Construction of 10-inch sewer on 22d Street, Panama City	100
Sewer construction and laying of water mains on Southern Avenue, Panama City	50

[1] Indicates that no work was done during the month.

Construction work for the Army and Navy is separately reported.

OCCUPATION OF QUARTERS.

Occupants of Panama Canal and Panama Railroad quarters on February 28, were classified as follows:

	Men.	Women.	Children.	Totals.		
				February, 1921.	January. 1921.	February, 1920.
Americans	3,482	2,300	2,729	8,511	8,409	8,277
Europeans	163	37	81	281	280	219
West Indians	4,948	2,228	4,519	11,695	11,503	7,823
Totals	8,593	4,565	7,329	20,487	.....	.....
Totals, January, 1921	8,513	4,500	7,179	.....	20,192	.....
Totals, February, 1920	7,478	3,722	5,119	.....	.....	16,319

WORKING FORCE.

(*Effective February 16, 1921.*)

Department or Division.	Employees.		Total employees.		
	Gold.	Silver.	February, 1921.	January, 1921.	February, 1920.
Operation and Maintenance:					
Office	30	47	77	75	86
Building Division	133	399	532	592	2,213
Electrical	208	254	462	479	625
Municipal Engineering	98	851	949	1,014	1,885
Lock Operation	190	862	1,052	787	806
Dredging	184	1,066	1,250	1,338	1,119
Mechanical	932	1,651	2,583	2,722	2,982
Marine	203	624	827	760	573
Fortifications	72	289	361	473	319
Totals	2,050	6,043	8,093	8,240	10,608
Supply Department:					
Quartermaster	216	1,516	1,732	1,855	1,928
Subsistence	31	439	470	454	449
Commissary	288	1,478	1,766	1,754	1,897
Cattle Industry—Plantations	22	418	440	436	1,397
Hotel Washington	8	101	109	102	103
Totals	565	3,952	4,517	4,601	5,774
Accounting	233	10	243	255	249
Health	247	891	1,138	1,125	1,140
Executive	570	257	827	823	844
Panama Railroad:					
Superintendent	70	515	585	586	641
Transportation	106	154	260	284	332
Receiving and Forwarding Agency	72	1,016	1,088	1,523	1,841
Coaling Stations	130	1,230	1,360	1,532	1,049
Totals	378	2,915	3,293	3,925	3,863
Grand totals	4,043	14,068	18,111	18,969	22,478
Grand total, January, 1921	4,145	14,824	18,969	.....	.....
Grand total, February, 1920	4,247	18,231	22,478		

VITAL STATISTICS.

A total of 143 deaths occurred during the month of February among the population comprising the Canal Zone and the cities of Panama and Colon, giving an annual death rate of 16.6 per thousand inhabitants. Of the total deaths, 20 were due to external causes.

Of the above deaths, 49, or 34 per cent, occurred among children under 5 years of age. Tuberculosis, diarrhea and enteritis, and acute and chronic nephritis were the leading causes of mortality in the order named.

There were 26 deaths among nonresidents of the Isthmus, which are not included in the above statistics.

Three hundred and five births were reported during the month, 13 of which were stillbirths. Including the stillbirths, this is equivalent to an annual birth rate of 31.1

per thousand population. Deaths among children under 1 year of age numbered 31, giving an infant mortality rate, based on the number of births reported for the month, of 196.1 per thousand.

Eighty-six cases of malaria were reported during the month, 28 of which were among nonresidents of the Isthmus. There was 1 case each of typhoid and dysentery.

Sixty-six cases of smallpox were admitted to the hospital during the month, making a total of 109 cases since January 1. Of the cases admitted during February, 27 were from Colon, 9 from Panama City, and 30 were from members of the Atlantic and Pacific fleets. All of the cases have been of a mild form and no deaths have resulted from this disease to date.

RECEIPTS AND SALES OF MATERIALS AND SUPPLIES.

The total value of the material ordered on United States requisitions and received on the Isthmus during the month of February was $949,014.95, as compared with $988,080.34 for the preceding month, and $530,558.37 for the corresponding month of last year. Of the material received during the month, $906,113.41 was chargeable to Operation and Maintenance, $20,318.02 to Construction and Equipment, and $22,583.52 to miscellaneous departments.

The total cash sales on the Isthmus for the month amounted to $69,897.14, of which $42,043.36 was for stock, $21,703.29 for fuel oil, $5,076.15 for scrap, and $1,074.34 for obsolete and second-hand material.

Sales to steamships from storehouses amounted to $44,572.86, of which $18,099.17 was for fuel oil, and $26,473.69 for miscellaneous stock items.

Total sales of commissary supplies to all purchasers amounted to $1,002,248.81, made up as follows: To steamships other than United States Government vessels and those of the Panama Railroad Steamship Line, $65,759.06; to The Panama Canal, $140,793.07; to the United States Government, including the Army and Navy, $246,185.53; to individuals and companies, mainly through charge accounts at the retail commissaries, $23,193.76; to the Panama Railroad, including its steamships and the Hotel Washington, $26,164.79, and to individuals purchasing coupons, $500,152.60.

FINANCIAL RECEIPTS AND EXPENDITURES.

The cash balance in Canal appropriations on February 28, exclusive of Fortifications, was $12,449,215.86. Payments made from appropriations by the Disbursing Clerk, Washington, amounted to $980,550.80, and by the Paymaster on the Isthmus, to $1,522,617.04. Purchases of commissary books from the Panama Railroad Company amounted to $335,118.04. The total cash collections on the Isthmus amounted to $2,193,375.09, classified as follows:

Repaid to appropriations	$917,391.41
Commissary and other trust funds	337,891.81
Tolls	917,421.49
Sales of water	1,879.70
Sales of obsolete material and equipment	1,278.30
Postal receipts	11,507.27
Licenses, taxes, court fees, fines, etc	6,005.11
Total	$2,193,375.09

Collections by the Disbursing Clerk, Washington, amounted to $7,140.10. Deposits of $56,700 were made with the Assistant Treasurer of the United States to be applied on payment of tolls and other charges against vessels using the Canal. Receipts from Canal Zone miscellaneous funds amounted to $295,609.27; disbursements from the same source were $204,294.03.

February payrolls on the Isthmus aggregated $1,284,786.70, as compared with $1,299,885.34 for the preceding month, and $1,234,877.50 for the corresponding month of last year.

Respectfully,

JAY J. MORROW,

Acting Governor.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to, "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Notice to Mariners.—Manzanillo Point Light Reported Unreliable.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 21, 1921.

CIRCULAR No. 643-80:

The Manzanillo Point Light, latitude 9° 39′ north, longitude 79° 33′ 30″ west, is reported to be in an unreliable condition. On February 26, 1921, the master of the U. S. A. T. *Santa Leonora* reported the light flashing irregularly at intervals of 4 to 5 minutes.

JAY J. MORROW,
Acting Governor.

Change in Tariff No. 4.—Reduction of Price of Diesel Oil.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., March 21, 1921.

To all concerned—The following change is made to Tariff No. 4, Schedule of Rates for Supplies and Services furnished to Shipping and Allied Interests at the Panama Canal:

ITEM 22—FUEL AND DIESEL OILS.
(Effective March 21, 1921.)

2. Diesel oil per barrel of 42 gallons, delivered to vessels at Cristobal..... $4.00

JAY J. MORROW,
Acting Governor, The Panama Canal.
Second Vice President, Panama Railroad Company.

(NOTE.—The above change will be included in Supplement No. 4 to Tariff No. 4, when this supplement is issued.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending March 26, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	*Tons.*
San Blas	United Fruit Co	March 20	March 20	5	(2)
Metapan	United Fruit Co	March 20	March 20	9	(2)
Segura	Pacific Steam Navigation Co		March 21		360
Ansaldo IV	National Navigation Society	March 20	March 21	7	121
Crynssen	Royal Netherlands W. I. Mail		March 22		1,055
Manavi	Pacific Steam Navigation Co		March 22		238
Palena	Chilean Line	March 20	March 23	610½	834
Balboa	Colombian Maritime Co	March 20		656	
Abangarez	United Fruit Co	March 21	March 24	562	35
Inca	Pacific Steam Navigation Co	March 22	March 24	43¾	59
Europa	Italian Line	March 22	March 25	(1)	53
Cuba	Pacific Mail Steamship Co	March 22		607	
Allianca	Panama Railroad Steamship Line	March 22	March 26	1,507	1,011
Chestnut Hill	Walker & Daley	March 23	March 26	6,750	(2)
Gen. O. H. Ernst	Panama Railroad Steamship Line	March 23	March 26	4½	2,429
Acajutla	Pacific Steam Navigation Co	March 24		353	
Cauca	Pacific Steam Navigation Co	March 25		597	
Ulua	United Fruit Co	March 25	March 26	375	257
San Bruno	United Fruit Co	March 26	March 26	50	(2)
Barima	Pacific Steam Navigation Co		March 26		860
Urubamba	Peruvian Steamship Co		March 26		565

[1] No cargo discharged. [2] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending March 26, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	*Tons.*
Cuba	Pacific Mail Steamship Co	March 21	March 22	34	39
Alvarado	Swayne & Hoyt	March 23	March 24	30	
Amur Maru	Osaka Shosen Kaisha	March 24	March 24	37	
Cauca	Pacific Steam Navigation Co	March 25	March 25	4	
Ulysses	Panama Railroad Steamship Line	March 26		12,052	

Distribution of cargo passing through the Canal from the Pacific to the Atlantic, February, 1921.[1]

From—	North America. United States. North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States	West coast of Canada.	West Indies.	Atlantic terminus Panama Canal.	East coast of Mexico.	Total, North America.	Europe. British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Spain.	Sweden and Norway.	Italy.	Europe.	Total, Europe.	United States.[2]	Azores.[2]	West Indies.[2]	Grand total.	Per cent of total cargo.
W. Coast of S. America:																									
Chile	26,615	24,734	4,533	55,882	.....	1,003	219	230	57,334	33,552	4,581	3,160	5,683	8,349	6,300	9,465	.....	100	30,921	102,111	7,900	38,665	8,830	214,842	44.9
(3)	1,779	.....	.....	1,779	.....	.....	.....	.....	1,779	5,708	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,708	.....	.....	.....	7,487	1.6
Colombia	1,833	.....	.....	1,833	.....	.....	2,484	.....	4,317	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,317	0.9
Ecuador	741	.....	.....	744	.....	.....	511	.....	1,255	.....	.....	.....	11	13	.....	.....	.....	.....	648	672	.....	.....	.....	1,927	0.4
Peru	2,024	.....	.....	2,024	2,659	.....	421	.....	5,104	7,443	.....	.....	20	98	517	.....	.....	.....	.....	8,078	.....	.....	.....	13,182	2.8
Total, S. America	32,995	24,734	4,533	62,262	2,659	1,003	3,635	230	69,789	46,703	4,581	3,160	5,714	8,460	6,817	9,465	.....	100	31,569	116,569	7,900	38,665	8,830	241,753	50.6
W. Coast of N. America.																									
W. coast of U. S.	56,906	2,396	3,788	63,090	.....	3,729	294	1,200	68,313	67,707	.....	.....	90	15,985	.....	.....	1,940	...	11,069	96,791	.....	.....	14,721	179,825	37.7
W. coast of Canada	1,399	.....	.....	1,399	.....	.....	.....	.....	1,399	282	.....	.....	.....	.....	.....	.....	.....	...	1,828	2,110	.....	.....	.....	3,509	0.7
W. coast, Cen. Am.	18	.....	.....	18	.....	.....	762	.....	780	.....	.....	.....	.....	.....	.....	.....	1,000	...	.....	1,000	.....	.....	.....	1,780	0.4
W. coast, N. America	.....	.....	.....	.....	.....	.....	.....	.....	.....	174	.....	.....	.....	.....	.....	.....	.....	...	.....	174	.....	.....	.....	174	.....
Total, N. America	58,323	2,396	3,788	64,507	.....	3,729	1,056	1,200	70,492	68,163	.....	.....	90	15,985	.....	.....	2,940	...	12,897	100,075	.....	.....	14,721	185,288	38.8
Asia:																									
China	878	.....	.....	878	.....	.....	.....	.....	878	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	.....	878	0.2
Japan	.....	2,000	.....	2,000	.....	.....	.....	.....	2,000	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	.....	2,000	0.4
Philippines	14,148	.....	.....	14,148	.....	.....	.....	.....	14,148	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	.....	14,148	2.9
Far East	5,194	.....	1,878	7,072	.....	.....	.....	.....	7,072	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	.....	7,072	1.5
Total, Asia	20,220	2,000	1,878	24,098	.....	.....	.....	.....	24,098	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	.....	24,098	5.0
Australasia:																									
Australia	4,722	.....	.....	4,722	.....	.....	.....	.....	4,722	3,547	5,400	.....	.....	.....	.....	.....	.....	...	.....	8,947	.....	.....	.....	13,669	2.9
New Zealand	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,224	.....	.....	.....	.....	.....	.....	.....	...	.....	7,224	.....	.....	.....	7,224	1.5
Australasia	2,000	.....	.....	2,000	.....	.....	.....	.....	2,000	4,000	.....	.....	.....	.....	.....	.....	.....	...	.....	4,000	.....	.....	.....	6,000	1.2
Total Australasia	6,722	.....	.....	6,722	.....	.....	.....	.....	6,722	14,771	5,400	.....	.....	.....	.....	.....	.....	...	.....	20,171	.....	.....	.....	26,893	5.6
Grand totals	118,260	29,130	10,199	157,589	2,659	4,732	4,691	1,430	171,101	129,637	9,981	3,160	5,804	24,445	6,817	9,465	2,940	100	44,446	236,815	7,900	38,665	23,551	478,032	100.0
Per cent of total cargo	24.7	6.1	2.1	32.9	0.6	1.0	0.9	0.4	35.8	27.1	2.1	0.7	1.2	5.2	1.4	2.0	0.6	...	9.3	49.6	1.7	8.0	4.9	100.0	.....
Per cent of total cargo last month	23.0	6.8	2.5	33.2	1.3	3.4	1.3	....	39.2	33.8	0.4	1.8	5.2	5.7	2.6	1.5	.....	3.6	4.2	58.9	.....	4.2	.....	.....	.....

[1] By tons of 2,240 pounds.

[2] For orders.

[3] Country not specifically mentioned.

Distribution of cargo passing through the Canal from the Atlantic to the Pacific, February, 1921.

From—	South America.						North America.						Asia.						Australasia.					
	Chile.	Colombia.	Ecuador.	Peru.	West coast, South America.	Total, South America.	West coast, United States.	West coast, Canada.	West coast, Central America.	Pacific terminus, Panama Canal.	Honolulu.	Total, North America.	China.	Japan.	Philippines.	Malay, Peninsula and East Indies.	Far East.	Total, Asia.	Australia.	New Zealand.	Australasia.	Total, Australasia.	Grand total.	Per cent of total cargo.
North America:																								
North Atlantic ports	8,179	81	833	4,749	18,764	32,605	45,635	21	.....	.....	274	45,930	13,582	2,734	438	628	32,428	49,810	4,850	.....	.....	4,850	133,195	28.0
South Atlantic ports	63,759	...	.....	.....	.....	63,759	229	.....	1,500	.....	.....	1,729	.....	.....	.....	.....	.....	.....	.....	14,838	.....	14,838	80,326	16.9
Gulf ports	9,630	...	112	1,358	181	11,281	20,351	.....	.....	8,900	8,500	37,751	21,944	12,163	....	3	1,290	35,400	17,671	2,047	.....	19,718	104,150	21.9
Total, United States	81,567	81	945	6,107	18,945	107,645	66,215	21	1,500	8,900	8,774	85,410	35,526	14,897	438	631	33,718	85,210	22,521	16,885	.....	39,406	317,671	66.8
West Indies	.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11,360	.....	.....	11,360	11,360	2.4
Panama Canal, Atlantic terminus	598	444	254	.....	1,917	3,213	1,390	.....	2,481	.....	.....	3,871	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,084	1.5
East coast, Canada	.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,684	5,684	5,684	1.2
East coast, Mexico	46,128	...	.....	.....	.....	46,128	36,525	10,000	3,000	.....	.....	49,525	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	95,653	20.2
Total, North America	128,293	525	1,199	6,107	20,862	156,986	104,130	10,021	6,981	8,900	8,774	138,806	35,526	14,897	438	631	33,718	85,210	33,881	16,885	5,684	56,450	437,452	92.1
Europe:																								
British Isles	650	...	.....	6	3,370	4,026	100	.....	.....	.....	60	160	.....	.....	.....	.....	.....	.....	.....	12,509	2,229	14,738	18,924	4.0
Belgium	.....	...	.....	.....	.....	.....	1,600	.....	.....	.....	.....	1,600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,600	0.3
Holland	168	...	.....	51	1,336	1,555	.....	10	.....	.....	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,565	0.3
Italy	2,460	...	.....	.....	.....	2,460	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,460	0.5
Germany	.....	...	.....	.....	2,557	2,557	150	.....	.....	.....	.....	150	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,707	0.6
Europe	.....	...	.....	.....	9,684	9,684	340	140	.....	.....	.....	480	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,164	2.2
Total, Europe	3,278	...	.....	57	16,947	20,282	2,190	150	.....	.....	60	2,400	.....	.....	.....	.....	.....	.....	.....	12,509	2,229	14,738	37,420	7.9
Grand totals	131,571	525	1,199	6,164	37,809	177,268	106,320	10,171	6,981	8,900	8,834	141,206	35,526	14,897	438	631	33,718	85,210	33,881	29,394	7,913	71,188	474,872	100.0
Per cent of total cargo	27.7	0.1	0.2	1.3	8.0	37.3	22.4	2.1	1.4	1.9	1.8	29.7	7.5	3.2	0.1	0.1	7.1	18.0	7.2	6.1	1.7	15.0	100.0	.....
Per cent of total cargo last month	27.6	0.4	0.8	3.5	2.9	35.2	20.5	0.9	0.5	5.8	.....	29.9	6.8	5.3	1.2	....	2.7	16.0	4.6	13.2	1.1	18.9	.....	.....

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, March 26, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Bratsberg	19	15.11	20	6.20	20	14.05	20	15.30	Norwegian	Borgstad Steamship Co.	345.0	49.0	26.0	New York	Valparaiso	Coal and general	4,693	4,263	3,042
Bakersfield	19	22.10	20	7.35	20	15.45	20	20.37	American	Williams-Dimond & Co. (S. B.)	410.5	54.3	14.6	Hamburg	Seattle	General	651	6,593	4,924
Mexican	20	7.20	20	8.18	20	16.08	20	17.15	American	American-Hawaiian Line	472.3	57.2	19.0	Boston	Los Angeles	General	2,659	9,258	6,912
Sacramento [1]	11	9.10	21	6.19	21	13.35	22	7.51	American	United States Navy	226.2	40.0	14.4	Almirante	Balboa				
Florence Olson	20	14.35	21	6.20	21	13.50	21	18.00	American	Oliver J. Olson	213.7	42.0	17.0	Ensenada	Talara	Ballast		1,381	635
Eelbeck	20	22.10	21	7.10	21	15.05	21	21.11	American	Williams-Dimond & Co. (S. B.)	401.7	54.8	17.0	Glasgow	San Francisco	General	1,572	6,928	5,103
Wenatchee	21	8.14	21	10.00	21	16.11	22	19.40	American	Pacific Steamship Co. (S. B.)	516.0	72.0	25.0	New York	Seattle	General	2,201	15,296	10,592
Australrange	21	7.42	21	10.30	21	18.52	21	21.52	British	Australian Government	375.0	53.0	24.6	Nuevitas	Sydney	Sugar	5,900	4,695	3,446
Moerdijk	20	19.15	21	13.32	21	20.09	21	21.13	Dutch	Holland-American Line	473.0	61.0	18.0	Rotterdam	Victoria	General	1,500	9,165	6,961
O-13 [2]			21	7.10	21	15.05			American	United States Navy				Cristobal	Balboa				
Amaryllis [3]	18	9.30	22	6.30	22	17.40			British	Lieut. G. H. P. Mulhauser	53.9	13.0	10.0	Plymouth	Sydney	Ballast		28	8
Manavi	16	20.40	22	7.08	22	14.16	22	15.25	British	Pacific Steam Navigation Co.	216.0	35.0	12.2	Cristobal	Guayaquil	General	240	1,357	884
Tippecanoe	22	8.45	22	9.40	22	17.18	23	12.07	American	Walker & Daley	477.0	60.0	23.0	Amsterdam	Seattle	Creosote	5,004	8,672	6,532
Belridge	22	13.09	22	13.25	22	21.30	22	22.48	Norwegian	W. Wilhelmsen	425.0	57.0	27.4	Tampico	Antofagasta	Petroleum	9,300	7,065	5,095
Granite State	22	11.55	22	13.45	22	21.42	23	7.37	American	Pacific Mail Steamship Co. (S. B.)	502.0	62.0	23.0	Baltimore	San Francisco	General	1,485	12,031	8,443
J. W. McKie [4]			22		22	9.02			American	United States Army				Cristobal	Gatun Lake				
No. 1266 [4]			22		22	9.02			American	United States Army				Cristobal	Gatun Lake				
Mafalda [5]	21	18.40	23	6.40	23	14.47	23	16.10	Norwegian	Fred Th. Bergh	245.0	37.2	19.4	Porsgrund	Honolulu	Ammonia	1,817	1,455	1,327
Montgomery City	23	6.22	23	6.45	23	13.46	23	18.00	American	U. S. Steel Products Co.	425.0	56.0	25.1	New York	San Francisco	General	8,989	7,539	5,448
Ethel [4]	23		23	6.00	23	18.44	23	19.35	American	A. Woolnough	22.4	5.7	3.2	Cristobal	Balboa			2	2
Eastern Mariner	23	10.23	23	10.50	23	18.05	23	21.45	American	Thorndyke & Trenholm (S. B.)	415.0	56.0	22.6	Antwerp	San Francisco	Iron, silver sand	2,900	7,329	5,373
Palena	20	13.30	23	11.17	23	18.44	23	21.15	Chilean	South American S. S. Line	350.0	42.0	24.6	Cristobal	Valparaiso	General	825	3,666	2,577
Inca	22	17.14	24	6.23	24	13.34	24	14.45	British	Pacific Steam Navigation Co.	360.6	43.2	20.8	Hull	Valparaiso	General	3,103½	3,952	2,742
Yalza	23	18.55	24	6.45	24	14.43	24	15.42	American	North Atl. & Western Co. (S. B.)	400.7	54.2	18.6	Portland, Me.	Portland, Oreg.	General	3,613	6,529	4,737
Eastern Sailor	24	6.21	24	7.20	24	15.41	24	16.37	American	Williams-Dimond & Co. (S. B.)	415.0	56.0	27.7	Norfolk	San Francisco	Coal	9,653	7,704	5,707
Albion Star	24	6.45	24	7.45	24	16.04	24	21.15	British	Blue Star Line	460.0	58.0	24.0	Barry	Auckland	Ballast		8,317	5,531
Tremorvah	23	20.50	24	9.22	24	17.39	24	18.40	British	Hain Steamship Co.	400.0	52.3	25.0	Saline	Newcastle	Oil and sulphur	6,500	5,786	4,078
Ulysses	24	17.00	25	6.10	25	13.56			American	Panama Railroad Steamship Line	538.0	63.0	30.3	Norfolk	Balboa	Coal	12,052	11,519	6,930
Urubamba	19	18.40	26	6.05	26	14.00	26	18.10	Peruvian	Peruvian Steamship Line	381.2	41.1	19.6	Cristobal	Callao	General	564	4,803	2,951
Hancock	22	17.42	26	6.10	26	16.04			American	United States Navy	475.0	43.2	26.0	Norfolk	San Francisco	Navy supplies	445		
Shinsei Maru	25	15.40	26	6.20	26	15.19	26	16.35	Japanese	Kishimoto Kisen Co.	360.0	51.0	21.9	New York	Yokohama	Cotton, general	4,894	4,754	3,516
Los Angeles	26	6.05	26	7.30	26	16.46	26	18.05	American	Union Oil Co.	435.0	56.0	29.0	Puerto Lobos	Los Angeles	Crude oil	11,000	7,380	5,195
Barima	19	18.45	26	9.57	26	17.24	26	18.30	British	Pacific Steam Navigation Co.	220.5	37.0	12.6	Cristobal	Champerico	General		1,651	918
Canadian Carrier	26	10.10	26	10.30	26	18.33	27	7.35	British	Canadian Government	319.0	44.0	22.0	Baltimore	Callao	Coke, cement	2,900		
Tydeus	26	6.20	26	13.12	26	20.19	26	21.21	British	Alfred Holt & Co.	455.0	54.0	27.0	New York	Yokohama	General	8,000	7,578	3,517

[1] Gunboat. [2] Submarine. [3] Yacht. [4] Launch. [5] Bark.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Palena	19	7.00	20	6.34	20	13.30	23	11.17	Chilean	South American Steamship Co.	350.0	42.1	20.0	Valparaiso	Cristobal	General	620	3,666	2,577
Cherry Branch	20	4.00	20	7.42	20	15.10	20	17.14	British	Nautilus Steamship Co.	398.4	51.9	26.0	Antofagasta	Liverpool	General	6,560	5,395	3,982
D. G. Schofield	20	5.30	20	8.27	20	16.08	20	16.08	American	Standard Oil Co.	439.5	58.0	30.0	San Francisco	Philadelphia	Lubricating oil	11,000	8,912	6,254
Pengreep	20	7.00	20	9.44	20	17.55	20	18.55	British	R. B. Chellew Steamship Co.	390.0	52.0	23.9	Portland	Rotterdam	Wheat	7,204	5,247	3,783
Eagle	20	10.10	20	12.13	20	19.18	20	19.30	American	Standard Transportation Co.	410.0	56.0	18.0	San Diego	New York	Ballast		8,243	6,266
Theodore Roosevelt	20	7.05	20	12.49	20	20.29	20	20.29	Norwegian	Fred Olson & Co.	425.5	55.2	29.2	Portland	Hamburg	Wheat	9,400	7,593	5,637
Ansaldo IV	19	22.15	20	13.09	20	21.20	22	6.05	Italian	Societa Nazionale di Nav.	377.0	51.0	20.0	Valparaiso	Genoa	General	780	5,473	3,599
Balboa	20	13.36	20	14.31	20	22.12			American	Colombian Maritime Co.	190.0	29.1	15.6	Guayaquil	Cristobal	General	656	741	350
Mina Brea	20	17.20	21	6.35	21	18.35	21	21.05	British	International Petroleum Co.	360.3	49.2	19.6	Callao	Texas City	Ballast		4,437	2,884
Liberator	20	15.30	21	6.43	21	17.49	21	17.48	American	Atl., Gulf and Pacific S. S. Co.	410.0	56.0	19.6	Seattle	Baltimore	Fruit, general	3,000	8,199	6,250
Republic	20	17.05	21	6.44	21	18.40	21	21.15	American	Chile Steamship Co.	345.1	49.1	21.0	Antofagasta	Baltimore	Copper	4,000	4,622	3,371
Bogota	21	5.45	21	9.41	21	20.35	22	1.00	British	Pacific Steam Navigation Co.	400.0	52.4	22.6	Talcahuano	Liverpool	General	5,648	5,733	4,013
Houston	21	12.33	22	6.35	22	14.50	23	13.25	American	United States Navy	375.0	52.0	19.3	San Diego	Hampton Rds.	Navy cargo	1,900		
Cuba	21	11.30	22	6.38	22	14.45	27	6.11	American	Pacific Mail Steamship Co.	307.7	42.2	16.0	San Francisco	Cristobal	General	657	3,429	2,206
Europa	21	20.30	22	7.19	22	19.00	25	9.57	Italian	La Veloce Line	406.2	53.3	21.8	Valparaiso	Genoa	General	27½	8,052	4,915
Caroline Maru	22	10.15	22	12.19	22	20.00	22	21.50	Japanese	Kokusai Kisen Kaisha	345.0	48.0	25.0	Tocopilla	Wilmington	Nitrate	5,500	4,216	2,921
Hesperos	22	16.20	23	6.39	23	15.55	23	15.55	Norwegian	Bruusgaard, Drammen	389.8	54.1	26.0	Pisagua	Virginia Capes[6]	Nitrate	8,289	5,693	4,230
Cara [4]	2–17	14.53	23	6.40	23	15.55			Panaman	Maj. G. L. FitzWilliams	45.0	9.0		Balboa	Cristobal				
Uncas	23	3.20	23	8.23	27	12.15	27	17.35	British	Standard Transportation Co.	375.0	51.2	15.0	San Pedro		Ballast		4,861	3,261
Imperoyal	23	14.45	24	6.45	24	14.40	24	16.45	British	Imperial Oil Co. Ltd.	249.5	43.0	21.0	Talara	Halifax	Gasoline	2,756	2,291	1,595
Arizonian	23	15.10	24	8.13	24	15.55	24	15.55	American	American-Hawaiian Line	470.1	57.2	22.5	Los Angeles	New York	General	5,989	9,158	7,015
Alvarado	23	15.15	24	10.55	24	18.00	24	22.12	American	Swayne & Hoyt	245.0	41.5	12.0	Seattle	Porto Rico	General	705	2,121	1,925
Amur Maru	24	7.15	24	14.33	24	22.50	23	23.30	Japanese	Osaka Shosen Kaisha	425.0	56.2	21.6	Singapore	New York	(7)	3,484	7,901	5,629
Acajutla	24	14.45	24	15.21	24	21.50			British	Pacific Steam Navigation Co.	215.7	33.5	13.4	Tumaco	Cristobal	(8)	384	1,273	706
Cristobal	19	15.45	25	9.20	25	16.14	25	22.57	American	Panama Railroad Steamship Line	489.5	58.0		Balboa	Norfolk	Ballast		10,697	8,063
Cauca	25	9.50	25	10.29	25	17.38			British	Pacific Steam Navigation Co.	246.0	35.2	13.8	Guayaquil	Cristobal	(9)	597	1,582	1,023
Happy Days [4]			25	8.54	25	12.59			American	H. J. Quigley				Balboa	Gamboa			1	1
Gold Star [4]	21		25	6.30	25	8.55			American	Panama Canal Lighthouse Div.	110.0	20.0		Balboa	Gamboa				
Durham	25	16.20	26	7.27	26	17.20	26	20.40	British	Federal Steamship Line	420.0	54.0	24.0	Wellington	Liverpool	Frozen, general	4,542	7,138	5,296
Gudrun Maersk	25	17.20	26	7.12	26	18.30	27	12.30	Danish	S. S. Comp. "Svendborg"	361.7	51.4	25.1	Taltal	Norfolk	Saltpeter	7,103	4,961	3,477
Hazel Branch	26	7.30	26	8.36	26	18.55	27	9.52	British	F. & W. Ritson	400.4	51.2	26.6	Punta Arenas	London	(10)	6,386	5,176	3,587

[6] For orders. [7] Vegetable oil and general. [8] Coffee, hides, cocoa, etc. [9] Cocoa, coffee, and general. [10] Nitrate, sugar, metals, etc.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
March 20	Metapan	United Fruit Co.	New Orleans via way-ports.
March 20	San Blas	United Fruit Co.	Port Limon.
March 20	St. Mihiel [11]	United States Army	New York via San Juan.
March 21	Abangarez	United Fruit Co.	New Orleans.
March 22	Allianca	Panama Railroad Steamship Line	New York via Haiti.
March 23	Gen. O. H. Ernst	Panama Railroad Steamship Line	Puerto Colombia.

*DEPARTURES.

Date.	Vessel.	Line.	For—
March 20	Metapan	United Fruit Co.	Bocas del Toro.
March 20	San Blas	United Fruit Co.	Boston.
March 21	Segura	Royal Mail Steam Packet Co	Cartagena.
March 21	Ancon	Panama Railroad Steamship Line	Norfolk.
March 21	Crijnssen	Royal Netherlands W. I. Mail	Puerto Colombia.
March 22	Ottar	J. C. Knudsen	New York.
March 23	Metapan	United Fruit Co.	New Orleans.

[11] Transport.

(Continued on page 504, column 2.)

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended March 26:

U. S. S. *Satterlee*, structural repairs to after starboard side, deck, and steering gear and renewing stem, due to collision; miscellaneous small maintenance jobs on main and auxiliary machinery; launch *Vacuum, Jr.*, repairs to port side of house and awning and life-line stanchions where damaged in collision and overhauling clutch; steamship *La Habra*, overhaul compressor end of refrigerating machine; U. S. submarines *O–11*, *O–12*, *O–13*, *O–15*, and *O–16*, periodical overhaul, including docking, cleaning, and painting bottoms and inside superstructure, renewing deteriorated plates and frames in superstructure and repacking stern glands, overhauling sea valves and trimming systems, cleaning and coating tanks, miscellaneous small items of adjustment and repairs to machinery; steamship *Cristobal*, docking, staging, and cleaning, painting bottom, cleaning and calking boilers, reboring port high-pressure engine and renewing bull and snap rings in same, changing one blade on port wheel, minor adjustments to auxiliary machinery, repairs to deck and hatch, strongback brackets damaged in coaling; pile driver *No. 198*, docking, staging, cleaning, and painting bottom; renewing one plate on the stern, blanking off 2 holes under counter, and redriving loose rivets in hull; U. S. tug *Sciota*, docking. staging, cleaning, and painting bottom, repacking stern gland and rudderpost gland, overhauling sea valves, testing and cleaning boilers, reboring water ends and renewing plungers in air pumps, manufacturing miscellaneous repair parts for auxiliary machinery; steamship *Steel Inventor*, docking, staging, cleaning, and painting bottom, renewing stem and renewing and fairing bent and damaged plates in wake of damage at bow; barges *Nos. 132* and *138*, docking, staging, cleaning, and painting bottom, cleaning and painting inside and out, renewing hopper sheathing and strongback sheathing, and rebuilding strongbacks and A-frames, overhauling operating gear; barge *No. 201*, docking, staging, cleaning, and painting bottom, cleaning and painting inside and out, renewing plates, fenders, and deck on one corner where damaged, rebuilding stanchions and roof; concrete pontoons, cofferdamming and repairing broken sides and deck, and repairing roof where damaged by being rammed by steamship *Wolverine State*; steamships *Caribbean*, general repairs to boilers and auxiliary machinery, minor repairs to main engines; overhauling cattle pens and cattle deck; cleaning and painting inside of hull and quarters, and miscellaneous minor repairs throughout vessel; *Caddo*, installing heater coils, trap in heater drains and compounding heaters.

The following vessels were at the Cristobal shops for repairs during the week ended March 28:

Steamships *Allianca* and *Gen. O. H. Ernst*, miscellaneous repairs and painting to engine, deck, and steward departments; U. S. Eagle *No. 31*, install ballast, clean and paint hull; U. S. submarine *O–14*, renew battery and hull ventilation ducts, make and install new anchor shaft, etc.; steamship *Balboa*, refasten valve-seats on circulating pump, renew 2″ sanitary line on port side, etc.; S. P. *No. 2235*, secure door on deck over galley and door on deck aft; manufacture and install wood deck on forecastle in place of steel deck, etc.; steamship *Acajutla*, clean and paint bottom; repair boilers; fit lagging on boiler; renew No. 1 steel plate; repair fiddley main deck; tug *Favorite*, repair boiler; overhaul and repair diving outfit. steamship *Europa*, thread and furnish 60 bolts, etc.; dredge *No. 86*, launch *Patrol*, tug *Porto Bello*, steamships *Poplar Branch*, *Parismina*, schooner *Scotia Maiden*, steamships *Cauca*, *Winyah*, *Tainui*, U. S. mine planter *Graham*, steamship *Palena*, launch *Wilhelm*, U. S. S. *Hancock*, U. S. S. *Houston*, minor repairs.

Approximate Sailings of Panama Railroad Passenger Vessels.

The following are the approximate sailings of Panama Railroad passenger steamers during the remainder of March and the month of April, 1921.

Steamer.	From New York.	Arrive Cristobal.	From Cristobal.	Arrive New York.
Gen. Geo. W. Goethals	March 19	March 28	April 3	April 12.
Panama	March 24	April 1	April 6	April 14.
Advance	March 26	April 3	.....	.....
Colon	March 31	April 8	April 14	April 22.
Cristobal [1]	April 6	April 13	April 17	April 24.[2]
Allianca	April 9	April 21	April 29	May 8.
Advance	.....	.....	April 29	May 7.

[1] From Norfolk. [2] Arrive at Norfolk.

The steamships *Advance*, scheduled to sail from New York on March 26, will, in all probability, sail direct for the Isthmus, and is en route to Colombian and Ecuadorian ports.

The steamship *Allianca*, scheduled to sail from New York on April 9, will call at various Haitian ports, Cristobal, Cartagena, and Puerto Colombia.

The steamship *Panama* may not sail from Cristobal on April 6 as scheduled, as in all probability she will be held a day or two in order to receive cargo from the steamship *Huallaga* of the Peruvian Line.

Official Circulars.

Appointment.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 28, 1921.

CIRCULAR No. 661-95.

Having been appointed as Governor of The Panama Canal, and having duly qualified this date, the undersigned hereby assumes his duties as such.

JAY J. MORROW.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 19, 1921.

CIRCULAR No. 286:

Effective March 16, 1921, Mr. L. J. Stapleton is designated an accountable official of The Panama Canal, *vice* Mr. Walter R. Smith, and as such will account for all storehouse stock at the Cristobal Store.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
JAY J. MORROW,
Acting Governor.

Manufacture of Nonexpendable Property.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 12, 1921.

CIRCULAR No. 284:

To all concerned—Effective April 1, 1921, the head of a division who manufactures nonexpendable property for delivery direct to an accountable official, whether to himself or another, must show on his monthly distribution of labor and material his authority for manufacturing, the quantity, the cost, and a full description of all such property.

All such articles excepting those manufactured by district quartermasters, will be invoiced by this office. District quartermasters will continue to invoice property manufactured by their own forces as in the past.

These instructions apply only to nonexpendable property manufactured for direct delivery but not to articles manufactured and turned into storehouses or commissaries for stock.

This cancels Circular No. 180 of October 25, 1918.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
JAY J. MORROW,
Acting Governor.

Act of Congress.—First Deficiency Appropriation, 1921.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 22, 1921.

CIRCULAR No. 600-75:

The extracts from an Act of Congress quoted below are published for the information of all concerned.

JAY J. MORROW,
Acting Governor.

AN ACT Making appropriations to supply deficiencies in appropriations for the fiscal year ending June 30, 1921, and prior fiscal years, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, to supply deficiencies in appropriations for the fiscal year ending June 30, 1921, and prior fiscal years, and for other purposes, namely:

* * * * *

PANAMA CANAL.

For civil government of the Panama Canal and Canal Zone, including the same objects specified under this head in the Sundry Civil Appropriation Act for the fiscal year 1921, $24,670.

For the payment to the McClintic-Marshall Construction Company, as recommended in the report made to Congress under date of February 11, 1916, by the commission appointed under the Act of June 24, 1914, and approved by the Governor of The Panama Canal (House Document Numbered 906, Sixty-fourth Congress, first session), $714,007.39; said amount to be chargeable as part of the construction of the Panama Canal and reimbursed to the Treasury of the United States out of the proceeds of the sale of the bonds authorized by section 8 of the Act approved June 28, 1902, and section 39 of the Tariff Act approved August 5, 1909.

* * * * *

SEC. 4. That this Act hereafter may be referred to as the "First Deficiency Act," fiscal year 1921."

Approved, March 1, 1921.

Prices of Coal.

THE PANAMA CANAL,
PANAMA RAILROAD COMPANY,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 21, 1921.

CIRCULAR No. RA-712:

To all station agents—The following prices per ton of 2,240 pounds have been fixed for the sale of coal for local use, effective April 1, 1921:

	Colon and Cristobal.	Balboa.	Panama and line points.
1. To Panama Canal and to Panama Railroad at coaling plants, without trimming...	$11.50	$13.00	.....
2. To parties taking carload lots, including U. S. Army and Navy, but exclusive of coal belonging to Navy.....	13.50	15.00	$15.00
3. Coal belonging to U. S. Navy will be delivered at the plant at which stored for	3.00	3.00	.....
4. To parties taking less than carload lots.....	14.50	16.00	16.00
5. To employees of The Panama Canal, Panama Railroad, United States Government and those entitled to employees rates, including Santo Tomas hospital.	13.50	15.50	15.00

The following are the prices for coal furnished to steamships, effective March 15, 1921, as published in supplement to Panama Canal Tariff No. 4:

	Colon and Cristobal.	Balboa.
1. To steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 2....	$12.00	$14.00
2. To vessels transiting the Canal that are directed by The Panama Canal to		

	Colon and Cristobal.	Balboa.
take coal at Balboa on account of the condition of the plants, and quantity available, or for the purpose of expediting transit.....		$12.00
3. To steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	$13.00	15.00
4. To steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 3, per ton of 2,240 pounds.....	14.00	16.00
5. When request is made by commander of vessel, chief engineer, or agent, for trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, an additional charge of 90 cents per ton will be made for extra handling.		
6. For lump coal for galley use, delivered in sacks, additional charge per ton, $10. Should the vessel furnish satisfactory sacks, the price will be only $3 per ton additional. Not more than 5 tons will be supplied to a vessel.		
7. For coal for cargo, delivered only by special authority of the Governor, per ton of 2,240 pounds.....	14.00	16.00

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
W. F. FOSTER,
Acting Superintendent.

Authorized:
J. J. MORROW,
Acting Governor.

Sailing of the "Gen. G. W. Goethals."

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
BALBOA HEIGHTS, C. Z., March 24, 1921.

To all concerned—The steamship *Gen. G. W. Goethals* will sail from Cristobal for New York, via Port-au-Prince, Haiti, on Sunday, April 3, at 3 p. m.

W. F. FOSTER,
Acting Superintendent.

Additions to Commissary Stock.

Dry Goods Section.

Bocas, mouth wash, P. C., bot..... (3 cents for return of empty bottle.)	$0.30
Laces, corset, 5-yard, pink, ea.....	.09
Laces, corset, 10-yard, pink, ea.....	.18
Lace, cotton, English, yd., $0.05, .09, .12, .15, .18, .22, .27, .35, .46	
Handkerchiefs, cotton, colored borders, ladies', ea.....	.20
Hats, ladies', straw, style "Warwick," ea..	1.90

Grocery Section.

Coffee, Commissary Special, 1-lb. bag....	.23
Tobacco, chewing and smoking:	
Courage, 1½-oz. plug.....	.07
Pluck, 1-oz. plug.....	.06

MOVEMENTS OF OCEAN VESSELS.—Continued from page 501.

PORT OF CRISTOBAL—continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
March 23	Chestnut Hill	United States Shipping Board	Tampico.
March 23	Metapan	United Fruit Co.	Bocas del Toro.
March 24	C. D. Bryant 5	Alexander Woodside	High seas.
March 25	Ulua	United Fruit Co.	New York.
March 26	San Bruno	United Fruit Co.	Boston.

*DEPARTURES.

Date.	Vessel.	Line.	For—
March 24	Abangares	United Fruit Co.	New Orleans via Bocas del Toro and Habana.
March 24	St. Mihiel 11	United States Army	New York.
March 24	Anthony D. Nichols	Astoria Mahogany Co.	New York.
March 25	Eagle No. 36	United States Navy	High seas.
March 26	San Bruno	United Fruit Co.	Boston.
March 26	Ulua	United Fruit Co.	New York via Port Limon and Habana.
March 26	Alianca	Panama Railroad Steamship Line.	New York.
March 26	Gen. O. H. Ernst	Panama Railroad Steamship Line.	New York via Haiti.
March 26	Chestnut Hill	United States Shipping Board	Tecomate, Mexico.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—

Date.	Vessel.	Line.	For—
March 25	Tacoma	United States Navy	La Union.

*Other than ships passing through the Canal.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates, domestic, $1.00 per year; foreign, $1.50; address The Panama Canal Record, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

Entered as second-class matter, February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Volume XIV. Balboa Heights, C. Z., April 6, 1921. No. 34.

New High Records for Net Tonnage and Tolls Made in March.

New high records for net tonnage of traffic through the Canal during a calendar month, and for tolls earned, were established by the traffic in March, 1921. In number of ships and cargo carried, however, the movement was less than in previous months.

The aggregate net tonnage of the commercial ships passing through the Canal in March, according to the rules of measurement for the Panama Canal, was 1,112,818 tons, as compared with 1,094,323 tons in January, 1921, the month of high record previous to March. The net tonnage of the ships under the rules for measurement for registry in the United States was 924,309 tons, as compared with 894,689 tons in January. The registered gross and net tonnages of the ships in March were 1,417,220 and 917,432, as compared with 1,383,778 and 883,362 tons, respectively, in January.

The tolls earned in March amounted to $1,105,529.05, as compared with $1,095,857.46 in January. March was the fourth month in which the tolls were in excess of $1,000,000, and the first in which they exceeded $1,100,000. The previous million-dollar months were September, 1920 ($1,010,150.63); December, 1920 ($1,007,849.32); and January, 1921 ($1,095,857.46).

The number of commercial ships making the transit in March was 255. This has been exceeded by a number of previous months; but the ships transiting the Canal in March were of larger average net tonnage. The cargo carried in the commercial ships aggregated 1,086,463 tons, which had been exceeded in only one previous month, January, 1921, when the cargo amounted to 1,177,053 tons.

The total numbers of commercial vessels, Government vessels, and launches through the Canal as compared with the preceding month, and of the corresponding month of last year, was as follows:

Vessels.	March, 1921.	February, 1921.	March, 1920.
Commercial vessels	255	241	233
United States Government vessels	37	94	8
Launches (under 10 tons)	11	3	2
Total vessels and craft	303	338	243

A comparison of tolls earned from commercial traffic for the month of March, 1921, as compared with that of the preceding month, and of the corresponding month of 1920, shows the following: March, 1921, $1,105,529.05; February, 1921, $917,412.49; March, 1920, $831,304.20.

President of the Panama Railroad Company.

A cable message from New York under date of April 4 states that at a meeting of stockholders of the Panama Railroad Company, Col. Jay J. Morrow had been reelected a director of the company, and that a directors' meeting had unanimously elected him president. Colonel Morrow became Governor of the Canal on March 28. While Engineer of Maintenance of the Canal he had been second vice president of the Panama Railroad Company.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, April 2, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross	Net.
Tainui	26	6.20	27	6.00	27	13.03	27	14.00	British	Shaw, Saville & Albion Co	476.0	61.0	26.0	London	Wellington			10,631	7,606
Cuba	22	14.45	27	6.11	27	13.48	27	22.30	American	Pacific Mail Steamship Co	307.7	42.2	19.3	Cristobal	San Francisco	General	720	3,429	2,206
Stanley Dollar	26	13.41	27	6.21	27	14.50	27	16.00	American	Dollar Line	288.8	41.6	21.8	Baltimore	San Francisco	General	2,911	3,469	2,404
M. S. Dollar	27	12.30	27	13.00	27	20.12	27	21.05	British	Robert Dollar Co	475.5	61.2	20.0	New York	San Francisco	General	3,066	10,116	7,680
Winyah	26	13.10	28	7.25	28	17.10	28	18.52	American	Barber Line	499.7	54.2	26.2	New York	Moji	Case oil	7,289	6,529	4,786
Port Caroline	28	10.20	28	10.59	28	18.27	28	19.40	British	Commonwealth and Dom. Line	480.0	62.4	27.0	Barry	Wellington	Coal	8,000	10,740	7,829
Robert C. Sudden	28	10.40	28	11.16	28	19.02	29	15.00	American	Crowley & Mahoney	223.0	43.6	20.6	Norfolk	San Francisco	Coal	1,896	1,563	898
Matatua	27	20.53	27	23.18	28	20.32	28	21.50	British	Shaw, Saville & Albion Co	447.5	56.5	25.7	Glasgow	Dunedin	General	4,676	8,535	6,044
Canada Maru	28	16.24	29	6.12	29	13.29	29	14.37	Japanese	Osaka Shosen Kaisha	400.0	51.0	22.0	Buenos Aires	Kobe	(6)	1,945	5,999	4,101
Asia [1]	28	6.15	29	6.15	29	13.51	29	14.41	Danish	East Asiatic Steamship Co	413.0	53.6	17.3	Copenhagen	San Francisco	General	2,200	7,390	5,588
Sacramento [2]	28	18.35	29	6.45	29	16.49	30	16.02	American	United States Navy	224.0	40.0		Cristobal	Balboa				
West Catanace	28	19.45	29	7.30	29	17.24	29	18.30	American	Elder Steel Steamship Co	410.0	51.0	24.0	Baltimore	Honolulu	Coal	6,537	6,567	4,917
Remuera	29	12.07	29	8.30	29	17.43	29	23.45	British	New Zealand Shipping Co	485.0	62.3	26.4	London	Wellington	General	4,621	11,664	8,776
Lake Fanbush	29	1.10	29	11.55	29	19.05	29	20.02	American	N. O. & S. A. S. S. Line (S. B.)	251.0	43.6	21.4	Jacksonville	Valparaiso	General, coal	3,137	2,861	1,816
Betty [3]			30	6.00	30	15.45			American	J. A. Justin	24.0	6.0	2.5	Cristobal	Balboa	Ballast		2	1
Pleaides	29	18.42	30	6.45	30	14.07	30	15.20	American	Luckenbach Line	331.5	47.0	24.0	New York	San Francisco	General	4,320	4,147	3,259
City of Shanghai	30	7.01	30	8.01	30	15.45	30	16.50	British	Hall Steamship Line	318.5	55.0	26.6	New Orleans	Dalney	General, steel	7,573	7,019	5,374
Red Wing [4]	29	22.10	30	8.37	30	11.51			American	United States Navy	186.0	30.0		Norfolk	Gatun Lake				
Santa Ana	30	3.31	30	11.30	30	18.10	30	19.10	American	W. R. Grace & Co	360.2	51.6	24.6	New York	Valparaiso	(7)	2,533	5,886	4,284
Chifuku Maru	30	6.55	30	12.30	30	20.23	1	0.10	Japanese	Kokusai Kisen Kabushiki Kaisha	385.0	51.0	22.8	Galveston	Kobe	General	4,587	5,776	4,081
Havre Maru	30	13.03	30	13.25	30	21.55	31	0.30	Japanese	Kokusai Kisen Kabushiki Kaisha	400.0	53.0	26.0	Matanzas	Yokohama	Sugar	7,350	5,819	4,400
S. V. Harkness	30	17.33	31	6.49	31	14.52	31	18.21	American	Standard Oil Co	419.0	57.0	27.0	Tampico	Vancouver	Crude oil	8,929	7,413	5,545
Canada	31	6.00	31	9.45	31	17.40	1	9.30	Swedish	Johnson Steamship Line	427.0	56.0	19.3	Antwerp	Vancouver	General	4,069	7,476	5,456
Cauca	25	17.38	31	9.47	31	16.30	31	18.10	British	Pacific Steam Navigation Co	245.0	35.2	14.2	Cristobal	Guayaquil	General	92	1,582	1,023
Lygnern	31	9.37	31	11.45	31	19.12	31	20.20	Swedish	Trans Atlantic Steamship Co	413.0	52.0	25.3	Texas City	Melbourne	Sulphur	7,100	6,280	4,567
Scotia Maiden [5]	27	8.30	1	6.28	1	16.09	1	17.25	British	Scotia Maiden Co	149.0	33.4	17.0	Galveston	Papeete	General	600	533	422
Eurymachus	1	5.35	1	6.59	1	13.52	1	16.09	British	Alfred Holt & Co	400.6	52.3	19.5	Liverpool	Tacoma	General	711	5,818	3,981
Valdez	1	5.52	1	7.15	1	15.16	1	20.49	American	Alaska Steamship Co	244.0	43.2	21.0	Norfolk	Bremerton	Coal	2,960	2,545	1,938
City of Auckland	1	13.10	2	6.29	2	13.45	2	14.45	British	Hall Steamship Line	478.0	62.0	23.6	New York	Lyttleton	General	9,000	9,394	6,723
West Isleta	1	22.05	2	6.34	2	14.35	2	15.28	American	N. Atl. & West. S. S. Co. (S. B.)	499.8	54.2	18.6	Philadelphia	Portland	General	1,359	6,759	4,900
Agron	1-23	20.50	2	6.59	2	10.45			American	Universl Ship. Trad. Co. (S. B.)	273.5	49.1	15.0	Cristobal	Gatun Lake	Ballast			
Maple Branch	2	6.11	2	10.10	2	17.30	2	18.55	British	F. & W. Ritson	400.0	52.0	22.11	Liverpool	Corral	General	6,600	5,618	4,116
Rio Gatun [3]			2	10.45	2				Panaman	A. R. Echardt	31.4	8.0	7.0	Cristobal	Monte Lirio	Ballast		8	7

[1] Motor ship. [2] Gunboat. [3] Launch. [4] Tug towing barges *Nos. 469* and *470*. [5] Auxiliary schooner. [6] Quebracho extract, machinery, cotton, rosin, lumber, and merchandise.
[7] Machinery, paint, provisions, and general.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Almelo	26	17.45	27	6.32	27	14.15	27	16.19	Dutch	Royal Netherlands Steamship Co.	463.0	62.3	23.0	Talcahuano	Rotterdam	Nitrate, general	10,000	9,492	6,653
Spermina	26	23.00	27	8.49	27	18.05	28	6.29	British	Chas. Lowe and partners	349.7	47.1	20.6	Caleta Buena	Falmouth [9]	Nitrate	5,300	3,698	2,679
Santa Tecla	27	4.20	27	8.50	27	17.30	27	17.40	American	W. R. Grace & Co.	298.6	40.0	17.8	Callao	New York	General	2,212	2,834	1,795
Orduna	27	19.00	28	6.30	28	18.29	29	10.43	British	Pacific Steam Navigation Co.	550.3	67.0	30.0	Valparaiso	Liverpool	General	5,948	17,155	11,897
Sacramento	25	.....	28	6.40	28	18.35	29	6.45	American	United States Navy	224.0	40.0	.....	Balboa	Cristobal	.....	.....	.....	.....
Steel Inventor	2-27	15.00	28	7.00	28	19.30	28	19.30	American	United States Steel Products Co.	424.2	56.2	26.1	Vancouver	New York	General	6,450	7,538	5,448
O-11 [8]	24	17.43	28	7.25	28	17.55	.....	.....	American	United States Navy	.....	.....	.....	Balboa	Cristobal	.....	.....	.....	.....
City of Para	27	21.00	28	10.25	28	20.40	3	6.15	American	Pacific Mail Steamship Co.	345.0	38.6	17.0	San Francisco	Cristobal	General	337	3,739	2,458
Poplar Branch	28	11.25	28	12.12	28	21.50	29	9.25	British	F. & W. Ritson	396.2	56.2	23.0	Puntarenas	London	Nitrate, sugar	7,379	6,640	5,107
George Washington	28	9.10	28	14.52	28	22.30	28	22.30	Norwegian	Fred Olsen & Co.	425.5	55.3	28.0	San Francisco	Leith, Scotland	Barley, general	8,510	7,505	5,626
San Joaquin	25	14.30	29	6.25	29	15.57	29	17.17	Norwegian	Wilhelm Wilhelmsen	425.4	57.1	19.0	Valparaiso	Tampico	Ballast	.....	7,059	5,081
O-16 [8]	2-24	17.43	29	7.15	29	15.57	.....	.....	American	United States Navy	.....	.....	.....	Balboa	Cristobal	.....	.....	.....	.....
Santa Luisa	30	5.00	30	7.53	30	17.55	30	19.09	American	W. R. Grace & Co.	360.2	51.6	19.6	Valparaiso	New York	([10])	2,000	5,604	3,975
Hermion	30	15.45	31	6.30	31	18.05	1	23.20	Norwegian	Bruusgaard Kiosterud	389.8	54.1	23.8	Portland	Brake	Wheat	7,808	5,745	4,231
Ulysses [3]	25	13.56	31	6.42	31	16.30	31	16.30	American	Panama Railroad Steamship Line	536.0	65.0	.....	Balboa	Norfolk	Ballast	.....	11,519	6,930
S. C. 284	.....	.....	31	7.48	31	17.53	.....	.....	American	United States Navy	110.0	16.0	.....	Balboa	Coco Solo	.....	.....	.....	.....
S. C. 286	2-20	16.49	31	7.48	31	17.53	.....	.....	American	United States Navy	110.0	16.0	.....	Balboa	Coco Solo	.....	.....	.....	.....
S. C. 288	2-19	18.46	31	7.48	31	17.53	.....	.....	American	United States Navy	110.0	16.0	.....	Balboa	Coco Solo	.....	.....	.....	.....
S. C. 355	20	16.49	31	7.48	31	17.53	.....	.....	American	United States Navy	110.0	16.0	.....	Balboa	Coco Solo	.....	.....	.....	.....
Spain Maru	1	0.05	1	7.52	1	15.52	1	17.10	Japanese	Kawasaki Co.	385.0	51.0	27.0	Mejillones	Savannah	Nitrate	8,010	5,924	4,392
Frederick Luckenbach	1	2.10	1	7.56	1	16.05	1	17.10	American	Luckenbach Line	317.5	40.2	21.0	Portland	Philadelphia	General	3,000	2,986	2,091
Gen. H. F. Hodges	2	2.00	2	7.46	2	14.51	.....	.....	American	Panama Railroad Steamship Line	323.5	39.0	21.0	Guayaquil	New York	General	2,460	3,013	1,574
Sherman	2	7.45	2	8.58	2	16.12	2	16.12	American	Sherman Steamship Co., Inc.	400.3	45.3	21.0	San Antonio	New York	Copper bars	4,000	4,989	3,512

[8] Submarine. [9] For orders. [10] Nitrate, sugar, and vanadium. Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
March 27	Turrialba	United Fruit Co.	New Orleans via wayports.
March 27	Gen. G. W. Goethals	Panama Railroad Steamship Line	New York via Haiti.
March 28	Parismina	United Fruit Co.	New Orleans.
March 28	Oranje Nassau	Royal Netherlands W. I. Mail	Amsterdam via wayports
March 29	Ramiro [11]	Jose M. de La Vega	Cartagena.
March 29	Achilles [12]	Panama Railroad Steamship Line	Norfolk.
March 30	Turrialba	United Fruit Co.	Bocas del Toro.
March 30	Carrillo	United Fruit Co.	New York via Kingston.
March 31	Santa Marta	United Fruit Co.	Colombian ports.
March 31	Atlas [13]	Curasche Scheepvart	Curacao.
March 31	Dowea	Curacao Shipping Co.	Curacao.
April 1	Toloa	United Fruit Co.	New York via wayports.

*DEPARTURES.

Date.	Vessel.	Line.	For—
March 27	Turrialba	United Fruit Co.	Bocas del Toro.
March 28	Oranje Nassau	Royal Netherlands W. I. Mail Co.	Port Limon.
March 30	Turrialba	United Fruit Co.	New Orleans.
March 31	Santa Marta	United Fruit Co.	New York via Kingston.
March 31	Parismina	United Fruit Co.	New Orleans via Bocas del Toro and Habana.
March 31	Carrillo	United Fruit Co.	New York via Colombia and Kingston.
March 31	Philadelphian	Leyland Line	New Orleans.
April 1	Ramiro [11]	Jose M. de La Vega	Cartagena.
April 2	Achilles [12]	Panama Railroad Steamship Line	Norfolk.
April 2	Toloa	United Fruit Co.	New York via Port Limon and Habana.

[11] Motor schooner. [12] Collier. [13] Tug.

(Continued on page 517, column 2.)

Length, Beam, and Draft of Commercial Vessels Through the Canal in February.

The aggregate and average length, beam, and draft of commercial vessels of various nationalities passing through the Canal in the month of February, 1921, are summarized in this table:

No. of ships.	Nationality.	Length.		Beam.		Draft.	
		Aggregate.	Average.	Aggregate.	Average.	Aggregate.	Average.
100	United States	37,925.8	379.3	5,122.8	51.2	2,260.6	22.6
80	British	28,293.8	353.7	3,757.6	47.0	1,613.2	20.2
18	Norwegian	6,318.3	351.1	894.2	49.7	379.2	21.1
13	Japanese	5,096.3	392.0	672.6	51.7	314.1	24.1
5	Spanish	1,745.2	349.0	242.9	48.6	110.1	22.0
4	Dutch	1,600.6	400.1	210.5	52.6	78.6	19.7
4	French	1,494.1	373.5	194.2	48.5	93.5	23.4
4	Danish	1,390.0	347.5	197.2	49.3	99.1	24.8
3	Italian	1,239.3	413.1	154.9	51.6	59.7	19.9
3	Chilean	954.8	318.3	118.0	39.3	56.0	18.7
2	Swedish	798.0	399.0	106.6	53.3	49.1	24.5
2	Costa Rican	224.0	112.0	50.0	25.0	16.0	8.0
1	Peruvian	381.3	381.3	41.1	41.1	19.1	19.1
1	Russian	299.7	299.7	41.5	41.5	18.9	18.9
1	Panaman	213.7	213.7	32.6	32.6	15.3	15.3
241		87,974.9	365.0	11,836.7	49.1	5,182.5	21.5

Inclusion of the noncommercial vessels would have increased considerably the aggregate figures for United States ships as 94 vessels operated by departments of the United States Government, principally the Navy, passed through the Canal free of tolls. Counting the noncommercial transits, a total of 335 ocean-going vessels passed through the Canal in February. In January, the month of greatest traffic since the opening of the Canal, 354 vessels made the transit; of these 279 were commercial ships and 75 were Government vessels passing free of tolls.

Shipment from Cincinnati to West Coast by All-Water Route.

A press report from Cincinnati, Ohio, states that a shipment of goods was dispatched from that city for Pacific Coast ports on March 21 "over the all-water route." It is said to be the first time that such a shipment from Cincinnati to the west coast has been routed by water. The cargo includes pianos, phonographs, and soap. It was dispatched on the Ohio River steamer *Queen City* for New Orleans, to be transferred there to one of the several lines running from New Orleans through the Panama Canal.

Cincinnati is in latitude 39° 6′ 30″ North and longitude 84° 30′ West (5 degrees west of the Panama Canal), and about 1,450 miles above New Orleans by the Ohio and Mississippi Rivers. It is 830 miles from New Orleans by rail and 752 miles from New York. The surface of the Ohio at Cincinnati at low water is 431.3 feet above sea level.

A note on the arrangement between the Pacific Gulf Caribbean Line, operating a coastwise service through the Canal, with calls at New Orleans, and the Warrior River Service, operating on the Mississippi River, for joint handling of shipments on through bill of lading between Pacific ports of the United States and inland ports on the Mississippi and its tributaries, was published in THE PANAMA CANAL RECORD of December 8, 1920.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Change in Tariff No. 4.—Ice.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., March 29, 1921.

To all concerned—The following change is made to Tariff No. 4, Schedule of Rates for Supplies and Services furnished to Shipping and Allied Interests at the Panama Canal:

ITEM 25—ICE.

Effective March 17, 1921.

1. Price at both terminals alongside ship, per ton..... $14.00

JAY J. MORROW,
Governor, The Panama Canal.
Second Vice President, Panama Railroad Company.

(NOTE—The above change will be included in Supplement No. 4 to Tariff No. 4, when this supplement is issued.)

Notice to Mariners.—Isla Verde Light, Colombia.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 30, 1921.

CIRCULAR No. 643-81:

The master of the Panama Railroad steamship *General O. H. Ernst* reports that the light on Verde Island, Savanilla Harbor, Colombia, has been changed from fixed white to flash of 1 second and eclipse, 4 seconds. Position of light is 11° 2′ 30″ N., and 75° 1′ W. H. O. Chart 925 affected.

Under date of March 14, 1921, the Commandant of the Port of Puerto Colombia reported to the Panama Railroad steamship agent at Barranquilla, Colombia, as follows:

"For your information I have to state that the fixed light of the Isla Verde (Puerto Belillo) Lighthouse has been replaced by a white flash light which operates by means of flashes every 5 seconds, each flash lasting half a second."

It is believed that the conflict in the reported flash interval will not render the distinguishing of the light uncertain.

JAY J. MORROW,
Governor.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended April 2:

U. S. S. *Satterlee*, structural repairs to after starboard side, deck, and steering gear and renewing stem, due to collision, miscellaneous small maintenance jobs on main and auxiliary machinery; launch *Vacuum, Jr.*, repairs to port side of house and awning and life-line stanchions where damaged in collision and overhauling clutch; U. S. submarines *O–12*, *O–13*, and *O–15*, periodical overhaul, including docking, cleaning and painting bottoms and inside superstructure, renewing deteriorated plates and frames in superstructure and repacking stern glands; overhauling sea valves and trimming systems, cleaning and coating tanks, miscellaneous small items of adjustment and repairs to machinery; pile driver *No. 198*, installing doublers on both sides from water line to fenders; U. S. tug *Sciota*, testing and cleaning boilers, reboring water ends and renewing plungers in air pumps, manufacturing miscellaneous repair parts for auxiliary machinery; barges *Nos. 137* and *138*, docking, staging, cleaning, and painting bottom, cleaning and painting inside and out, renewing hopper sheathing and strongback sheathing, and rebuilding strongbacks and A-frames, overhauling operating gear; barge *No. 201*, renewing plates, fenders, and deck on one corner where damaged, rebuilding stanchions and roof, concrete pontoons, cofferdamming and repairing broken sides and deck, and repairing roof where damaged by being rammed by steamship *Wolverine State*; steamship *Caribbean*, general repairs to boilers and auxiliary machinery, minor repairs to main engines, overhauling cattle pens and cattle deck, cleaning and painting inside of hull and quarters, and miscellaneous minor repairs throughout vessel; barge *No. 47*, reboring fenders, hull plates and deck plates, on one corner where damaged; launch *Coco Solo*, general repairs to engine, clutch, and tail shaft; steamship *Ulysses*, reboring low-pressure cylinders and renewing rings; calking leaks in boilers.

The following vessels were at the Cristobal shops for repairs during the week ended April 4:

Steamships *Panama*, *Achilles*, and *General G. W. Goethals*, miscellaneous repairs and painting to engine, deck, and steward departments; U. S. Eagle *No. 31*, install ballast, clean and paint hull; U. S. submarine *O–14*, renew battery and hull ventilation ducts, make and install new anchor shaft, etc.; steamship *Balboa*, refasten valve-seats on circulating pump; renew 2" sanitary line on port side, etc.; S. P. *No. 2235*, secure door on deck over galley and door on deck aft, manufacture and install wood deck on forecastle in place of steel deck, etc.; steamship *Acajutla*, clean and paint bottom, repair boilers, fit lagging on boiler, renew No. 1 steel plate, repair fiddley main deck; tug *Atlas*, examine propeller shaft and repair as directed, unship two fuel pumps and install two new pumps; tanker *Doewa*, alter crew accommodations, manufacture, fit, and install steel water-tight doors as per plan furnished, examine and repair gravity tank valves, etc.; tug *Porto Bello*, braze flange for main steam pipe, renew suction to sea cock, etc.; steamships *Cartago*, *Tyne*, *Oranje Nassau*, *Parismina*, *Philadelphian*, motor ship *Canada*, steamship *Poplar Branch*, launches *Naos*, *Margarita*, *Nard*, *Rodman*, *Patrol*, dredge *No. 86*, tugs *Favorite*, *Tavernilla*, minor repairs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending April 2, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	*Tons.*
Cuba	Pacific Mail Steamship Line	.....	March 27	.....	736
Gen. G. W. Goethals	Panama Railroad Steamship Line	March 27	.....	1,975	.....
Asia	East Asiatic Co	March 28	March 29	127	274
Parismina	United Fruit Co	March 28	March 31	718	100
City of Para	Pacific Mail Steamship Co	March 28	.....	337	.....
Philadelphian	Leyland Line	March 29	March 31	411	341
Cauca	Pacific Steam Navigation Co	.....	March 31	.....	131
Achilles	Panama Railroad Steamship Line	March 29	April 2	12,006	(1)
Ramiro	Jose M. de la Vega	March 29	April 1	35	5
Turrialba	United Fruit Co	March 30	March 30	½	1
Carrillo	United Fruit Co	March 30	March 31	555	289
Santa Marta	United Fruit Co	March 31	March 31	2	11
Canada	Johnson Line	March 31	March 31	20	(1)
Toloa	United Fruit Co	April 1	April 2	7	45
Oranje Nassau	Royal Netherlands W. I. Mail	April 1	April 2	22	250
Panama	Panama Railroad Steamship Line	April 2	.....	2,094	.....
Gen. H. F. Hodges	Panama Railroad Steamship Line	April 2	.....	64	.....
Camito	Elders & Fyffes, Ltd	April 2	April 2	20	[2]315

[1] No cargo laded. [2] Pounds.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending April 2, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	*Tons.*
Cuba	Pacific Mail Steamship Co	March 27	March 27	.....	11
City of Para	Pacific Mail Steamship Co	March 27	March 28	11	.....
Tokuyu Maru	Toyen Kabushiki Kaisha	March 28	March 28	90	.....

Amendment to First Paragraph of the Edge Act.

(PUBLIC—No. 329—66th CONGRESS.)

(S. 4436.)

AN ACT To amend the Act approved December 23, 1913, known as the Federal Reserve Act.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the first paragraph of the Act approved December 24, 1919, known as the Edge Act, amending the Federal Reserve Act, be amended by adding at the end a proviso, so that the paragraph as amended will read as follows:

"SEC. 25. (*a*) Corporations to be organized for the purpose of engaging in international or foreign banking or other international or foreign financial operations, or in banking or other financial operations in a dependency or insular posssession of the United States, either directly or through the agency, ownership, or control of local

institutions in foreign countries, or in such dependencies or insular possessions as provided by this section, and to act when required by the Secretary of the Treasury as fiscal agents of the United States, may be formed by any number of natural persons, not less in any case than five: *Provided*, That nothing in this section shall be construed to deny the right of the Secretary of the Treasury to use any corporation organized under this section as depositaries in Panama and the Panama Canal Zone, or in the Philippine Islands and other insular possessions and dependencies of the United States."

Approved, February 27, 1921.

Wages of Silver Roll Employees.

The policy of The Panama Canal with relation to the wages of its so-called "silver roll" employees, who are largely West Indians, has been to increase their wages in accordance with the increase in the cost of living. The first increase of this kind was made in 1916, and as living costs have advanced, similar increases have been made since then. The rate for common labor is now 23 cents an hour, as compared with 10 cents an hour in 1914, with the difference that an 8-hour day is worked now, whereas a 9-hour day was worked in 1914, making the comparative daily compensation $1.84 at the present time and 90 cents in 1914.

A study of the cost of living, made in March, 1921, indicates that a reduction of 2 cents an hour would be justifiable on account of decreases in living cost. It has been decided, however, not to make this reduction at this time but to await the developments of the next few months in commodity prices.

It has been decided, however, not to authorize further advances within the schedule as established at this time except in cases of special merit, and to this end, the following circular has been issued by the Governor, dated April 4, 1921:

RATES OF PAY—SILVER ROLL.

(Supplement No. 26 to Circular No. 666-14.)

TO HEADS OF DEPARTMENTS AND DIVISIONS:

Effective April 1, 1921, heads of departments and divisions are advised that, until further notice, it will be the general policy of The Panama Canal and Panama Railroad Company to limit promotions on the silver roll to cases where a special reason exists for the promotion. Recommendations for such promotions should be considered by the head of the department or division, and, if approved, should be forwarded by him to the Governor before the 10th of the month preceding that in which the promotion is to become effective. Sections 4, 10, 21, and 22 of Circular 666-14 are amended accordingly.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies, including the 25 per cent surcharge, effective April 1, 1921:

Commodities.	Unit.	Price.
Brass, bar, average	Lb.	$0.31
Brass, sheet, average	Lb.	.55
Bronze, Tobin, average	Lb.	.35
Cement, at Panama:		
Including bags and surcharge	Bag	2.07
Credit for empty bags returned	Bag	.25
Cement, at Colon:		
Including bags and surcharge	Bag	1.95
Credit for empty bags returned	Bag	.25
Charcoal	Cwt.	1.63
Gasoline, motor grade	Gal.	.40
Lead, sheet, average	Lb.	.125
Lead, pig	Cwt.	11.68
Lumber, yellow pine or fir, except ceiling	M ft. B. M.	77.50
Lumber, ceiling, siding, and flooring, 1" x 6"	M ft. B. M.	96.25
Lumber, flooring, 1" x 3" and 1" x 4"	M ft. B. M.	108.75

Lumber, native, prices per 1,000 feet board measure:

Kind.	Rough. Green.	Rough. Kilned.
Almendra	$106.25	$118.75
Alcavu	87.50	100.00
Alcareto	106.25	118.75
Amargo	106.25	118.75
Bateo	62.50	75.00
Cedro Amargo	106.25	118.75
Caoba Blanca	87.50	100.00
Guayacan	137.50	150.00
Maria	62.50	75.00
Pilon	75.00	87.50
Roble	62.50	75.00
Mangle Colorado	106.25	118.75
Nispero	137.50	150 00

Notes:

1. Second grade Alcavu $68.75
2. Second grade Caoba Blanca 68.75
3. Second grade Cedro Amargo 93.75
4. Almendra, special 75.00
5. Alcareto, special 75.00
6. Amargo, special 75.00
7. Other than rough standard native lumber required by individuals and companies will be manufactured by the Mechanical Division for their account.

Commodities.	Unit.	Price.
Metal, yellow	Lb.	$0.34
Oakum, navy, spun	Lb.	.175
Oakum, navy, unspun	Lb.	.175
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl of 42 gals	2.75
Oil, fuel, at Balboa and Cristobal, in drums or barrels, no surcharge	Bbl of 42 gals	3.00
Oils, greases, and lubricants:		
Oil, air compressor cylinder	Gal.	.51
Oil, ammonia cylinder	Gal.	.51
Oil, burning	Gal.	1.25
Oil, cylinder, dark, marine	Gal.	1.10
Oil, cylinder, ice machine, steam	Gal.	.91
Oil, dynamo	Gal.	.775
Oil, engine, in tins	Gal.	.675
Oil, engine, in barrels	Gal.	.49
Oil, gas, engine, heavy, in barrels	Gal.	1.04
Oil, gas, engine, heavy, in cases	Gal.	1.125
Oil, gas, engine, medium, in drums	Gal.	.65
Oil, kerosene, in drums	Gal.	.375
Oil, kerosene, in tins	Gal.	.425
Oil, linseed, boiled	Gal.	2.225
Oil, linseed, raw	Gal.	1.61
Oil, locomotive engine	Gal.	.34
Oil, lard	Gal.	1.925
Oil, marine engine	Gal.	1.04
Oil, marine engine	Gal.	.59
Oil, marine engine	Gal.	.89
Oil, marine engine	Gal.	.99
Oil, mineral seal	Gal.	.35
Oil, nonliquid	Lb.	.075
Oil, stationary engine	Gal.	.50
Oil, sperm	Gal.	2.61
Oil, gas engine, motor, heavy	Gal.	.475
Oil, signal	Gal.	1.24
Oil, valve	Gal.	.46
Oil, car	Gal.	.21
Grease, gear, black	Lb.	.06
Grease, yellow, cup, No. 3	Lb.	.11
Grease, yellow, cup, No. 5	Lb.	.11
Grease, rod, special	Lb.	.225
Grease, tunnel bearing	Lb.	.19
Tallow	Lb.	.24
Turpentine	Gal.	2.26
Turpentine, substitute	Gal.	.725
Vaseline	Lb.	.15
Paint, lead, white, dry	Lb.	.14
Paint, lead, white, in oil	Lb.	.16
Paint, zinc, white, dry	Lb.	.20
Paint, zinc, white, in oil	Lb.	.20
Paint, zinc, white, leaded, 35 per cent in oil	Lb.	.16
Rope, manila, $\frac{1}{4}$" diameter	C. ft.	.59
Rope, manila, $\frac{3}{8}$" diameter	C. ft.	1.175
Rope, manila, $\frac{1}{2}$" diameter	C. ft.	2.20
Rope, manila, $\frac{5}{8}$" diameter	C. ft.	3.64
Rope, manila, $\frac{3}{4}$" diameter	C. ft.	4.69
Rope, manila, $\frac{7}{8}$" diameter	C. ft.	6.19
Rope, manila, 1" diameter	C. ft.	7.78
Rope, manila, $1\frac{1}{4}$" diameter	C. ft.	12.21
Rope, manila, $1\frac{1}{2}$" diameter	C. ft.	17.51

Commodities.	Unit.	Price.
Rope, manila, 1¾" diameter	C. ft.	$25.83
Rope, manila, 2" diameter	C. ft.	30.90
Rope, manila, 2½" diameter	C. ft.	49.35
Rope, manila, 3" diameter	C. ft.	67.53
Rope, manila, 3½" diameter	C. ft.	91.15
Rope, manila, 4" diameter	C. ft	111.43
Soap, laundry	Lb.	.125
Soda, ash	Lb.	.04
Waste, colored	Lb.	.25
Waste, white	Lb.	.25
Zinc, boiler plate, ⅛" x 6" x 12"	Lb.	.15

Reduced Rate Granted by All America Cables, Inc., to Government Employees on Personal and Social Messages.

Under an agreement with the All America Cables, Inc., the employees of the United States Government resident on the Isthmus are accorded reduced rates for the transmission of personal and social messages.

No reduction in rates is allowed on messages of a business or commercial nature.

May Weather Probabilities.

The following weather conditions may be expected at the Canal entrances during the month of May, 1921. These predictions are based on the weather records at Cristobal and Balboa Heights for the last 13 and 14 years, respectively.

Winds—The 1st of May usually marks the beginning of settled rainy season weather. The trade wind belt moves northward at this season of the year and the wind force on the Isthmus is greatly lessened. Compared with April, there is a decrease in wind movement of approximately one-third. Although the prevailing wind direction continues from the north over the Atlantic side and from the northwest over the interior and Pacific side, the percentage of light and variable winds is greatly increased. The average hourly velocity for the month is about 8 miles at Cristobal and about 6 miles at Balboa Heights. A maximum velocity greater than 30 miles an hour is not likely, although higher velocities have occurred during thunder squalls.

Rain—Heavy rains may be expected on both coasts and over the interior. The monthly average rainfall at Cristobal is 12.45 inches and at Balboa Heights 8.23 inches. About 22 days with rain (0.01 inch or more) may be expected on the Atlantic Coast and 20 on the Pacific Coast. The average number of days with 1 inch or more has been 2 on the Pacific Coast and 5 on the Atlantic.

Fogs—No fogs are likely to occur at either Canal entrance. Night and early morning fogs may be expected quite frequently over the interior. Most of these will be light, however, and will be dissipated before 8.30 a. m.

Temperature—The monthly mean temperature will average about 80° F. on both coasts. The mean daily range in temperature will probably be about 9° F. on the Atlantic Coast and about 14° F. on the Pacific Coast. On the Atlantic Coast no temperatures higher than 91° nor lower than 71° may be expected while on the Pacific Coast 96° and 69° are the extremes of record.

Relative humidity—The relative humidity will average about 85 per cent on both coasts, but the daily range will be considerably greater on the Pacific side.

Storms—No general storms are probable, but thunder squalls may be expected at both Canal entrances. During these storms, comparatively high wind velocities may be attained, but the storms are of too short duration to cause a rough sea. The average number of days with thunderstorms on the Atlantic side is 12, and on the Pacific side, 14. Generally cloudy weather may be expected during the month on both coasts.

Tides—The tidal fluctuations on the Atlantic side are too small to affect navigation. Balboa tide predictions for May are given below. These are taken from *Tide Tables for 1921*, published by the Department of Commerce, Washington, D. C.

Day of- W.	Day of- Mo.	Time and Height of High and Low Water.				Day of- W.	Day of- Mo.	Time and Height of High and Low Water.				Day of- W.	Day of- Mo.	Time and Height of High and Low Water.			
S	1	4:29	10:37	**5:03**	**11:01**	Th	12	0:45	6:57	**1:12**	**7:14**	M	23	4:38	10:46	**4:47**	**11:11**
		4.0	11.9	**4.5**	**11:2**			-0.1	15.4	**1.3**	**15.3**			15.1	1.2	**15.5**	**0.1**
M	2	5:27	11:41	**6:01**	.....	F	13	1:37	7:49	**2:11**	**8:10**	Tu	24	5:20	11:25	**5:23**	**11:49**
		4.0	12.2	**4.1**	.....			0.6	15.0	**1.9**	**14.6**			14.9	1.6	**15.0**	**0.6**
Tu	3	0:08	6:23	**12:34**	**6:56**	S	14	2:37	8:47	**3:16**	**9:13**	W	25	6:01	12:04	**6:08**	.....
		11.6	3.8	**12.8**	**3.5**			1.3	14.5	**2.4**	**13.9**			14.6	2:1	**14:5**	.....
W	4	0:59	7:16	**1:19**	**7:46**	S	15	3:43	9:53	**4:24**	**10:24**	Th	26	0:27	6:41	**12:46**	**6:48**
		12.3	3.2	**13.6**	**2.6**			1.8	14.1	**2.5**	**13.5**			1.3	14.2	**2.8**	**13.9**
Th	5	1:44	8:04	**1:59**	**8:32**	M	16	4:47	11:04	**5:29**	**11:38**	F	27	1:09	7:22	**1:31**	**7:28**
		13.1	2.5	**14.4**	**1.7**			2.1	14.1	**2.4**	**13.5**			2.1	13.7	**3.5**	**13.2**
F	6	2:25	8:49	**2:40**	**9:14**	Tu	17	5:51	12:12	**6:32**	.....	S	28	1:55	8:04	**2:23**	**8:10**
		13.8	1.8	**15.1**	**0.7**			2.2	14.5	**2.0**	.....			2.9	13.3	**4.1**	**12.5**
S	7	3:06	9:31	**3:20**	**9:54**	W	18	0:42	6:52	**1:08**	**7:31**	S	29	2:46	8:52	**3:19**	**9:04**
		14.5	1.1	**15.7**	**-0.1**			14.0	2.0	**15.0**	**1.5**			3.6	12.8	**4.5**	**11.9**
S	8	3:48	10:11	**4:02**	**10:34**	Th	19	1:40	7:48	**1:57**	**8:23**	M	30	3:41	9:45	**4:17**	**10:03**
		15.1	0.5	**16.1**	**-0.6**			14.5	1.6	**15.5**	**0.8**			4.0	12.6	**4.6**	**11.6**
M	9	4:31	10:53	**4:45**	**11:14**	F	20	2:26	8:40	**2:43**	**9:11**	Tu	31	4:36	10:44	**5:14**	**11:12**
		15.5	0.3	**16.2**	**-0.8**			14.9	1.3	**15.8**	**0.3**			4.2	12.7	**4.3**	**11.7**
Tu	10	5:18	11:35	**5:32**	**11:58**	S	21	3:11	9:25	**3:26**	**9:53**						
		15.6	0.3	**16.1**	**-0.6**			15.1	1.1	**15.8**	**-0.1**						
W	11	6:06	12:21	**6:22**	.....	S	22	3:56	10:08	**4:07**	**10:33**						
		15.6	0.7	**15.8**	.....			15.2	1.0	**15:7**	**-0.1**						

The tides are placed in the order of their occurrence; the *times* of high and low tides are shown on the upper lines. The figures in boldfaced type are hours and elevations between noon and midnight; *ante meridian* figures are given in the ordinary lightfaced type. The time is Cosmopolitan Standard for the meridian 75° W.

The *elevations* of the water are shown on the second line for each day; a comparison of consecutive heights will indicate whether it is high or low water. Heights are reckoned from mean low water springs, which is 8.3 below mean sea level and is the datum of soundings on the Coast and Geodetic Survey charts for this region. The depth of water may accordingly be estimated by adding the tabular height of the tide to the soundings, unless a minus (—) sign is before the height, in which case it is to be subtracted. The annual inequality or variation in the mean sea level is included in the predictions.

Dangers of Malarial and Other Infection on Trips Outside of Areas of Sanitation.

The Chief Health Officer authorizes the following:

Because of the many cases of malaria resulting from hunting, camping, and other recreational visits to native villages and unsanitated areas of the Isthmus, the Executive Secretary, in a letter dated March 22, 1919, directed that all scoutmasters, teachers, and others officially in charge of recreational outings submit their plans to the Chief Health Officer for his approval, before undertaking such expeditions. Since the publication of that letter, the Chief Health Officer has withheld his approval on several such occasions, doubtless to the great disappointment of the energetic young scouts and other adventurous persons.

The experience of the past 3 months (the dry season) proves the wisdom of such restrictions and again emphasizes the fact that only in the sanitated areas of the Zone does comparative safety from malaria exist. From January 1 to March 26, 1921, there have been treated, among the civilian and Army population of the Zone, 334 cases of malaria; of these 334 cases, *hardly a half dozen* (other than recurrent or chronic cases) have been chargeable against the sanitated areas, and even of these there are reasons for strongly suspecting that the infections originated in unsanitated areas. It can be said truthfully that, in the dry season at least, the sanitated areas (and these only) are practically free from malaria.

The Chief Health Officer greatly regrets his inability to authorize many proposed expeditions, some of which would be most delightful, in all but their after-results, but taking into consideration the great danger from malaria, dysentery, and other tropical diseases, his advice to careful, conscientious parents, is that they keep themselves and those committed to their charge inside the districts where they receive the maximum protection of sanitation. With proper care as to food and water it is perfectly safe to make such short trips as can be done with the assurance of being within the safety zones after dusk. Any other course brings risks that are unjustified and may result in protracted illness and even death.

Protection of Birds.—Carrying of Toy Arms by Children.

The Chief of the Police and Fire Division authorizes the following:

Attention is called to the fact that many of the present Canal employees, and their children, do not seem to be aware of the regulations for the protection of birds and their nests in the Canal Zone. The regulations are therefore republished for the benefit of all concerned:

SECTION 1. Birds' nests and eggs shall not be taken nor wilfully destroyed or disturbed.

SEC. 2. No birds shall be held or sold, nor shall any bird be snared, trapped, or captured by any device, except native, or foreign live cage birds known as parrots, parrakeets, macaws, skylarks, and canaries.

SEC. 3. Excepting the hereinafter-named game birds, and excepting birds of prey in pursuit of their quarry, no bird shall be hunted or killed, shot at, or wilfully disturbed.

SEC. 4. During the periods specified but at no other times, the following-named game birds may be hunted and killed, but only by a person holding a license to hunt in the Canal Zone:

From and including June 1, to and including October 15 of every year:

"The various species of native wild ducks, pigeons, and doves, and the native game birds belonging to the families of birds known as quail, currasows, and guans.

From and including October 15, to and including January 31 of every year:

(*a*) The migratory ducks known as blue-winged teal, broadbill, mallard, pintail, and shoveler.

(*b*) The migratory shore birds known as Wilson's or jack-snipe, and those known as yellow legs.

SEC. 5. The taking of all birds, their nests and eggs for purely scientific purposes may be authorized by the Chairman of the Isthmian Canal Commission, or by the Governor of the Panama Canal, provided that any person desiring such authority shall first submit in writing satisfactory evidence of his or her object which shall be indorsed by some known ornithologist, or the head of a scientific institution of good standing.

SEC. 6. Possession of a bird, or any part thereof, plumage, nest, or egg shall be *prima facie* evidence of the violation of these regulations upon the part of the person having it in possession.

It is to be noted that, with the exception of the provisions for trapping and keeping five varieties of cage birds and for seasonal hunting of certain game birds, the protection of birds is absolute.

The carrying of firearms, including small rifles, and of slingshots, except under permit, is prohibited in the Canal Zone; and as the possession of them by children leads almost inevitably to their hunting birds, it is expected of parents that for the double reason they will not give their children such arms, as both possession and use in the hands of unlicensed persons are contrary to the law.

The protection of birds is based primarily on their value as destroyers of insects, and secondarily on considerations of humanity.

Change in Service of Meals at the Tivoli and Washington Hotels.

Beginning May 1, the restaurants of the Tivoli and Washington hotels will be conducted with *a la carte* and special *table d'hote* services at all meals, replacing the present system of *a la carte* breakfasts and *table d'hote* luncheons and dinners. The present regular meal prices will be eliminated and the prices of the *table d'hote* meals will be established daily according to the nature and extent of the meal. Prices will be the same to employees of the Government as to others.

The monthly restaurant rates for regular boarders will be abolished, with the proviso that such of these as have been enjoying employees' rates may continue to pay employees' rates for their quarters during the extent of their present stay.

College Catalogues.

For the benefit of those desirous of entering colleges in the fall, The Panama Canal Library has a supply of the latest catalogues from various colleges and universities in the United States. Catalogues have been received during the past week, from: Colgate University, Hamilton, N. Y., and Massachusetts Institute of Technology, Boston, Mass., for men; Cornell University, Ithaca, N. Y., and University of Michigan, Ann Arbor, Mich., coeducational; Simmons College, Boston, Mass., Vassar College, Poughkeepsie, N. Y., and Wellesley College, Wellesley, Mass., for women.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted,

persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z. (telephone 286):

Assistant in exhibits, $1,500 to $1,800 a year (male and female); form 2118; age, 21 but not 45 years; vacancies exist in the Bureau of Animal Industry, Department of Agriculture, Washington, D. C.; April 26, 1921.[1]

Assistant oil shale engineer; $1,800 to $2,400 a year (male and female); form 2118; age, below 45 years; vacancies exist in the Bureau of Mines, Department of the Interior, Washington, D. C.; April 26, 1921.[1]

Associate in clinical psychiatry and psychotherapy; No. 129-amended; closing date extended to July 1, 1921.

Dietitian, $720 a year (male and female); form 1312; age, within reasonable age limits; vacancies exist in the Public Health Service; June 30, 1921.[1]

Preparator in nematology, $900 to $1,200 a year (male and female); form 304; age, 18 but not 55 years; vacancies exist in the Bureau of Plant Industry, Department of Agriculture; April 27, 1921.

Chief draftsman (aeronautical), $15.04 per diem (male and female); form 1312; announcement No. 170; age, within reasonable age limits; vacancies exist in the naval aircraft factory, Navy Yard, Philadelphia, Pa.; April 26, 1921.[1]

Foundry helper, $720 to $1,080 a year (male and female); form 304; announcement No. 161; age, 18 but not 50 years; vacancies exist in the Bureau of Standards, Department of Commerce, Washington, D. C.; April 27, 1921.[1]

Physical laboratory helper, $600 to $900 a year (male and female); form 304; announcement No. 164; age, 16 but not 35 years; vacancies exist in the Bureau of Standards, Department of Commerce, Washington, D. C.; April 13, May 25, and July 6, 1921.

Superintendent of maintenance, $2,400 to $3,000 a year (male and female); form 1312; announcement No. 162; age, below 55 years; vacancies exist in the Ordnance Department at Large, Raritan Arsenal, Metuchen, N. J.; April 12, 1921.[1]

Junior assistant in market business practice, $1,500 to $2,100 a year (male and female); form 1312; age, 21 but not 40 years; vacancies exist in the Bureau of Markets, Department of Agriculture; April 27, 1921.

Laboratory aid in forest pathology, $840 to $1,200 a year (male and female); form 304; age, 16 but not 45 years; vacancies exist in the Bureau of Plant Industry, Department of Agriculture, Field; June 8, 1921.

Mechanical superintendent (aircraft); $11.68 per diem (male and female); form 1312; age, below 55 years; vacancy exists in the naval aircraft factory, Navy Yard, Philadelphia, Pa.; April 26, 1921.[1]

Petroleum engineer (oil and gas production); $3,000 to $4,500 a year; oil recovery engineer, $3,000 to $3,600 a year; expert driller, $3,000 to $3,600 a year; chief oil gauger, $3,000 to $3,600 a year; assistant petroleum engineer, $1,800 to $2,100 a year; oil gauger, $1,800 to $2,100 a year (male and female); form 2118; age, within reasonable age limits; vacancies exist in the Bureau of Mines; April 26, 1921.[1]

Scientific assistant, $1,200 a year (male and female); form 1312; age, 20 but not 40 years; vacancies exist in the Bureau of Fisheries, Washington, D. C.; April 27, 1921.

[1] Nonassembled. Date given for nonassembled examination is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Civil Service Examinations.

Clerk, optional subjects of typewriting, bookkeeping, accounting training and experience, general business training and experience, timekeeping training and experience; usual entrance salaries, $116.67 to $158.33 a month; Postal Clerk, usual entrance salary, $145.83 a month (male and female); form 1312; announcement No. 484-amended; age, 18 but not 45 years; vacancies exist in The Panama Canal Service, April 9, 1921.

Stenographer and typist (male and female); usual entrance salaries, $137.50 and $158.33 a month; form 1312; announcement No. 484-amended; age, 18 but not 45 years; vacancies exist in The Panama Canal Service; April 16, 1921.

Official Circulars.

Acting Auditor, etc., in Accounting Department.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 31, 1921.

To all concerned—Effective this date, and during the absence of Mr. H. A. A. Smith, Mr. Elwyn Greene will act as Auditor, and Mr. W. H. Kromer as Assistant Auditor on the Isthmus. Mr. John J. Luckey will act as Chief Accountant.

JAY J. MORROW,
Governor.

Acting Municipal Engineer.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 31, 1921.

To all concerned—Effective April 1, 1921, Mr. George W. Green will be in charge of the work of the Municipal Engineering Division as Acting Municipal Engineer during the absence of Mr. D. E. Wright, Municipal Engineer, on leave.

JAY J. MORROW,
Governor.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 29, 1921.

CIRCULAR NO. 287:

Effective March 17, 1921, Mr. W. F. Foster is designated an accountable official of The Panama Canal, *vice* Mr. S. W. Heald, and as such will account for all nonexpendable property in use by the Superintendent, Panama Railroad and Panama Canal transportation.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
JAY J. MORROW,
Governor.

Act of Congress—Payment to Panama—Relief and Protection of American Seamen.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 22, 1921.

CIRCULAR No. 600-76:

The extracts from an Act of Congress quoted below are published for the information of all concerned.

JAY J. MORROW,
Acting Governor.

AN ACT Making appropriations for the Diplomatic and Consular Service for the fiscal year ending June 30, 1922.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, in full compensation for the Diplomatic and Consular Service for the fiscal year ending June 30, 1922, for the objects hereinafter expressed, namely:

* * * * *

PAYMENT TO THE GOVERNMENT OF PANAMA.

To enable the Secretary of State to pay to the Government of Panama the tenth annual payment, due on February 26, 1922, from the Government of the United States to the Government of Panama under article 14 of the treaty of November 18, 1903, $250,000.

* * * * *

RELIEF AND PROTECTION OF AMERICAN SEAMEN.

Relief and protection of American seamen in foreign countries, and in the Panama Canal Zone, and shipwrecked American seamen in the Territory of Alaska, in the Hawaiian Islands, Porto Rico, the Philippine Islands, and the Virgin Islands, $150,000.

* * * * *

Approved, March 2, 1921.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., March 21, 1921.

Insufficiently addressed mail matter for the following has been received in the office of the Director of Posts and may be obtained upon request of the addressees. Request for forwarding may be made by telephone, calling No. 182, Balboa:

Ackerman, A. S.
Albarado, Mrs. Carmen
Baker, Homer
Barrett, Mrs. A. L.
Baybutt, Veda P.
Boon de Ramos, Fredalinda
Bullen, Geo. M.
Capallia, Johnnie
Capon, Louise
Carr, Mary, c/o Jas. Kelly
Chanselor, Helen
Damour, A. F.
Davey, Don A.
Dippel, J. H.
Dunkley, Edward
Dunn, Mrs. G. W.
Faust, Leonard F.
Gansen, Miss M.
Gittens, Henry W.
Grant, Mrs. Mabel F.
Gray, James
Greenwood, C. Ashton
Hill, Miss Annie, Box 222.
Howell, Alice V.
Hull, W. J.
Hunter, Lulu
Ketcham, W. H.
Lewis, Thomas
Lidbitter, George S.
McLennan, Roderick
Miller, Ruth
Miller, T. A.
Mooney, Virginia
Nugent, Ray
Parke, F. R.
Peacock, S. A.
Phillips, Charles A.
Phillips, Mrs. R. E.
Porter, Lucius
Quick, Mrs. J. T.
Slack, Miss Helen
Shepperson, Samuel
Small, H.
Tager, George
Towler, Mrs. H. H.
Turley, R. E.
Tufor, Dorothy
Tuttle, Mearle J.
Vradenbury, George
Waller, Mrs. Helen V.
Weidemann, Mrs. Carl
Whittier, David H.
Wiggins, Lois
Wilson, Irene H.
Wilson, Ralph
Wright, Mrs. G. F.
Yount, Carl C.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 507.

PORT OF CRISTOBAL—continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
April 1	Oranje Nassau	Royal Netherlands W. I. Mail	Port Limon.
April 2	Panama	Panama Railroad Steamship Line	New York via Haiti.
April 2	Camito	Elders & Fyffes, Ltd.	Port Limon.
April 2	Tyne	Royal Mail Steam Packet Co.	London via wayports.

*DEPARTURES.

Date.	Vessel.	Line:	For—
April 2	Camito	Elders & Fyffes, Ltd.	Kingston.
April 2	Oranje Nassau	Royal Netherlands W. I. Mail	Puerto Colombia.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—
March 28	Tokuyo Maru	Toyo Kisen Kaisha	Valparaiso.
March 29	Tokuyo Maru	Toyo Kisen Kaisha	Hongkong.

*Other than ships passing through the Canal.

Sailing of the "Panama."

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
BALBOA HEIGHTS, C. Z., March 31, 1921.

To all concerned—The steamship *Panama* will sail from Cristobal for New York, via Port au Prince, Haiti, on or about Thursday, April 14, 1921, at 3 p. m.

W. F. FOSTER,
Acting Superintendent.

Fort de Lesseps-Fort Sherman Boat Schedule.

HEADQUARTERS, C. D. OF CRISTOBAL,
FORT DE LESSEPS, C. Z., March 29, 1921.

MEMORANDUM:

1. The following boat schedule regulating water traffic between Forts de Lesseps and Sherman, is announced, effective Thursday, March 31, 1921:

DAILY SCHEDULE.

Leave de Lesseps.	Leave Sherman.
7.00 a. m.	8.00 a. m.
8.30 a. m.	[1]10.00 a. m.
[1]12.00 noon	1.00 p. m.
1.30 p. m.	2.00 p. m.
3.45 p. m.	4.15 p. m.
6.00 p. m.	6.30 p. m.
[2]11.00 p. m.	[3]11.30 p. m.

[1] Freight trip. [2] Tuesdays, Thursdays, and Saturdays only. [3] When *Poe* runs only.

2. The steamers *Poe* and *Forse* will operate on alternate days under this schedule. These headquarters will announce on Fridays the detail for these vessels by dates, for the ensuing week. The *Forse* docks at Fort Sherman, and the *Poe* at Fort de Lesseps when not running. Additional trips necessary for these vessels to go on schedule, or to return to berths after completion of the daily run, are not shown on this schedule.

3. The following emergency boat schedule is announced for use on short notice when boiler cleaning, repairs, or an unforeseen contingency necessitates the withdrawal of one of the large vessels, the *Poe* or *Forse*, from the regular schedule. Advance notice will be given when possible, specifying the exact period during which the emergency schedule will operate:

Poe or *Forse*.		*Wilhelm* (or *L-53*).	
Leave De Lesseps.	Leave Sherman.	Leave De Lesseps.	Leave Sherman.
7.00 a. m.	8.00 a. m.	.....	.....
8.30 a. m.	10.00 a. m.	.....	.....
12.00 noon	1.00 p. m.	.....	.....
.....	.....	1.30 p. m.	2. 00 p. m.
3.45 p. m.	4.15 p. m.	.....	.....
.....	.....	6.00 p. m.	6.30 p. m.

Night trips on emergency schedule, Saturday only.

4. The capacity of launches *Wilhelm* and the *L-53*, is limited to 30 passengers.

5. Round-trip boat passes are obtainable at the Adjutant's Office, Headquarters, Coast Defenses of Cristobal, Fort de Lesseps, and at Headquarters, Fort Sherman, for passengers from that post. Members of the Army and Navy in uniform require no passes.

By order of Colonel Cloke:

H. LE R. MULLER,
Adjutant.

Sale of Equipment on Hand at the Old Power and Refrigerating Plant, Commissary Division, Cristobal.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., April 12, 1921, and then opened for the purchase of various ice machinery, electrical generators, pumps, etc., on hand at the old power and refrigerating plant, Commissary Division, Cristobal. Form of proposal may be had upon application to the office of the Chief Quartermaster, or the General Manager, Commissary Division. The Panama Canal reserves the right to reject any or all bids.

Additions to Commissary Stock.

Dry Goods Section.

Braid, mohair, black, yd	$0.12, .13, .20
Braid, silk, yd	.25
Braid, military, black, yd	.04
Buttons, pearl, white, 2-hole, doz	.17

Grocery Section.

Beans, Chiriqui, lb	.06
Beans, Chiriqui, 1s pkg	.07
Cheese, Parmesan, grated (Cross & Blackwell), ½-pint bot	.57
Candies, Roberts:	
Chocolate nougatines, 3-oz. box	.25
Chocolate caramels, 3-oz. box	.25
Chocolates, assorted, red, 3-oz. box	.18
Caramels, Phoebe Phelps, 2½-oz. pkg	.10
Caramels, Phoebe Phelps, 1½-oz. pkg	.05

Hardware Section.

Athletic goods:	
Bats, autographed, No. 350, ea	3.00
Bats, No. 200-S, ea	1.75
Bats, No. 50-B, ea	.43
Balls, golf, Spalding Fifty, 31 d'wt, ea	.60
Balls, golf, Midget Dimple, 31 d'wt., ea	.60
Electrical goods:	
Percolators, valveless, Grecian urn, cup, plain urn, ea	19.75
Mattresses, 3/0 x 6/3, Ostermoor, ea	26.20
Nitro-solvent, P. C., 3-oz. bot	.15
Pipes, briar, ea	.27
Razor, Durham Duplex, set	.78
Trunks, wardrobe, Seward's:	
43¾"	38.50
42"	$40.65, $43.05
40"	$26.70, $35.50

Route Service Jitney—Cristobal-Mt. Hope.

The following is the schedule of the official jitney service between the Terminal building at Cristobal and Mount Hope. Cars stop at the office of the Commissary Division each way:

Leave Terminal Building.		Leave Mount Hope.	
A. M.	P. M.	A. M.	P. M.
8.00	12.30	8.15	12.45
8.30	1.00	8.45	1.15
9.00	1.30	9.15	1.45
9.30	2.00	9.45	2.15
10.00	2.30	10.15	2.45
10.30	3.00	10.45	3.15
	3.30		3.45

Locations of Patients, and Visiting Hours, at Ancon Hospital.

The following table shows the distribution of patients in the new Ancon Hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Present number of beds.	Visiting hours.
Section "A"—White American, male:		Tuesdays, Thursdays, and Saturdays, 2 to 4.30 p. m. and 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11 a. m. and 2.30 to 4.30 p. m.
Ward No. 1, Medical, Eye and Ear	44	
Ward No. 2, Medical, Eye and Ear	41	
Ward No. 3, Surgical	44	
Ward No. 4, Surgical	41	
Cells (2)	2	
	172	
Section "B":		
White American, female	23	Daily except Sunday, 2 to 4.30 p. m.; 6.30 to 8 p. m. Sundays and holidays, 10 to 11 a. m.; 2 to 4.30 p. m. 6.30 to 8 p. m.
White foreign, female	15	
Nursery	16	No visitors permitted.
Private rooms (40)	46	Daily, 9.30 to 11 a. m.; 2 to 4.30 p. m.; 6.30 to 8 p. m.
Cells (2)	2	
	102	
Section "C":		
Ward No. 9, White foreign, male	39	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 10, Colored, eye and ear, convalescent medical	39	
Ward No. 11, Colored Acute surgical	39	
Ward No. 12, Colored Acute medical	39	
Ward No. 13, Colored Convalescent surgical	39	
Ward No. 14, Colored Convalescent surgical	39	
Cells (6)	6	
Rooms (7)	7	
	247	
Section "D":		
Ward No. 15	41	
Ward No. 16	39	
Ward No. 17, Colored children	32	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 18, White children	30	Daily, 9.30 to 10 a. m.; 2 to 4 p. m.
Ward No. 19, Colored female medical	41	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 20, Colored female surgical	34	
Rooms (6)	6	
Cells (6)	6	
	229	
Isolation:		No visitors permitted.
Floor No. 1	14	
Floor No. 2	29	
Floor No. 3	28	
Floor No. 4	28	
	99	
Total number of beds	849	

Emergency passes are issued only by and in the discretion of the section nurse.

Schedule of Official Jitney Service.

Following is the schedule of the official jitney plying between Balboa shops and the Ancon police station, carrying employees in the conduct of official business, upon presentation of passes issued by the Chief Quartermaster or of the "special pass" issued by the Governor:

FROM ANCON POLICE STATION TO BALBOA SHOPS.

Police Station	Leave on the hour and half hour.
Administration Building	Leave 7 minutes and 37 minutes after the hour.
Balboa Commissary	Leave 10 minutes and 40 minutes after the hour.
Balboa shops	Arrive 15 minutes and 45 minutes after the hour.

FROM BALBOA SHOPS TO ANCON POLICE STATION.

Balboa shops	Leave 15 minutes and 45 minutes after the hour.
Port Captain's Office	Leave 18 minutes and 48 minutes after the hour.
Balboa Commissary	Leave 20 minutes and 50 minutes after the hour.
Administration Building	Leave 25 minutes and 55 minutes after the hour.
Ancon Police Station	Arrive on the hour and half hour.

COMMISSARY NOTES.

New Stock Hardware.

Several items which have temporarily been out of stock in the hardware sections have been received and are now on sale. These include porch shades, army locker trunks, bread boxes, hair floor brushes, flour sifters, and a few other articles.

Notice of Discontinuance.

It has been decided to close the Cristobal tailoring shop and the taking of orders for the making of garments has been discontinued. The Ancon tailoring shop, however, will continue to operate as usual.

Lettuce.

Recent advice from the Commissary Purchasing Agent was to the effect that the lettuce to be had in the market at that time was of such quality that it would not stand shipment. However, it is expected that within a very short time lettuce from South Carolina will be available.

Oil of Citronella.

Oil of Citronella, bottled at the Commissary Division's plant, is particularly good for keeping insects away. Many will find it useful on jungle trips, a light application to the exposed skin having the desired effect. It is sold for 20 cents the 2-ounce bottle.

Sheet Music.

A large shipment of popular sheet music, ranging in price from 9 cents to 38 cents per copy, has just been received from New York and distributed to the line stores. Included are the latest Broadway numbers as well as selections from musical comedies and comic operas now current. This gives the commissaries the most complete assortment they have ever had.

Metal Cleanser.

A new item manufactured by the Commissary Division is Nitro-solvent, which has been prepared in response to requests from sportsmen all over the Isthmus for a satisfactory article for cleaning the inside of gun barrels, cylinders, and chambers. This preparation will keep these parts in first-class condition and will prevent pitting of metal. The formula used has been approved by one of the largest manufacturers of firearms in the United States. The price is 15 cents for a 2-ounce bottle.

Books.

Books received:

"Pipefuls," by Christopher Morley; "Roaming through the West Indies," by Harry A. Franck.

A large shipment of popular-priced books, in which are included a number of Zane Grey's novels, and books for boys; "Lightnin'," by Frank Bacon; "Way Down East," by John R. Grismer; detective stories by Arthur B. Reeve; "Tales of Tarzan," by Edgar Rice Burroughs, as well as fiction by Sir Gilbert Parker, A. T. Quiller-Couch, and others, has been distributed among Ancon, Balboa, Cristobal, Pedro Miguel, and Gatun commissaries, and is now on sale. These are priced at $1.

Salad Dressing and Pastry Coloring.

The Washington and Tivoli hotels are imparting an attractive tint to the dressing used on certain fruit salads, by means of a solution manufactured by the Commissary Division and sold in 2-ounce, 4-ounce, and 8-ounce bottles, at 10 cents, 15 cents, and 30 cents per bottle, respectively. It may be had for this purpose in strawberry red or in brilliant green. The Commissary Division also manufactures lemon yellow, orange, chocolate brown, and a lighter brown solution at the same prices. These may be used for coloring cakes, jellies, ice cream, icings, etc. All are produced from certified colorings only and conform with the National Food and Drugs Act.

THE PANAMA CANAL RECORD

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Volume XIV. Balboa Heights, C. Z., April 13, 1921. No. 35.

Amendment to Tariff No. 4.—Water.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., April 4, 1921.

The following amendment is made to Tariff No. 4, Schedule of Rates for Supplies and Services Furnished to Shipping and Allied Interests at the Panama Canal:

ITEM 23.—WATER.

Effective May 1, 1921.

1. Canal Zone:
   - Alongside of dock, through hose, per 1,000 gallons..... $0.50
   - Minimum charge, regardless of quantity..... 3.00
   - Delivered to ships at anchor by floating equipment—
     - Minimum charge for 16,000 gallons or less..... 60.00
     - For each additional thousand over 16,000 gallons, per 1,000 gallons 2.00
     - Charges are based upon even thousand gallons, 500 gallons or over being charged as 1,000 gallons.

JAY J. MORROW,
Governor, The Panama Canal.
President, Panama Railroad Company.

(NOTE.—The above change will be included in Supplement No. 4 to Tariff No. 4, when this supplement is issued.)

Canal Traffic in March.

The number of commercial ships passing through the Canal in March was 235, an average of 8.2 per day. Their aggregate net tonnage, Panama Canal measurement, was 1,112,818 tons. The total cargo carried was 1,184,563 tons of 2,240 pounds. The tolls earned amounted to $1,105,536.55.

The March traffic was distributed over trade routes as shown in the following tabulation:

ATLANTIC TO PACIFIC.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From East Coast of United States to Far East:							*Long tons.*
British	8	36,813	43,889	53,614	34,733	$45,773.65	51,859
Japanese	8	31,920	35,522	46,967	31,466	39,278.45	35,226
United States	4	14,724	19,606	24,134	14,927	18,405.00	26,974
Totals	20	83,457	99,017	124,715	81,126	103,457.10	114,059
United States coastwise:							
United States	16	62,697	71,770	92,878	58,560	75,338.65	55,111
From East Coast of United States to West Coast of South America:							
United States	7	19,431	25,368	32,167	19,631	24,285.05	28,040
British	4	9,753	13,352	17,579	10,374	12,191.25	4,824
Brazilian	1	3,511	4,566	5,472	3,523	4,388.75	6,700
Russian	1	3,375	3,940	5,236	3,398	4,218.75	5,037
Norwegian	1	2,444	3,042	3,652	2,418	3,055.00	4,749
Danish	1	1,523	1,492	1,955	1,208	1,790.40	2,347
Totals	15	40,037	51,760	66,061	40,552	49,929.20	51,697
From Europe to Australasia:							
British	14	80,599	96,952	121,525	77,844	100,189.30	72,339

ATLANTIC TO PACIFIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From United States to Australasia:							*Long tons.*
British	6	28,787	35,493	43,172	28,492	$35,983.75	41,684
Japanese	1	4,357	4,400	5,857	4,259	5,280.00	6,142
United States	1	2,996	3,743	4,747	2,984	3,745.00	5,262
Swedish	1	2,850	4,567	4,875	3,677	3,562.50	7,100
Totals	9	38,990	48,203	58,651	39,412	48,571.25	60,188
From Europe to West Coast of South America:							
British	6	23,723	28,395	38,158	23,831	29,653.75	22,523
French	1	3,600	4,146	5,765	3,881	4,500.00	777
Danish	1	2,771	3,484	4,358	2,771	3,463.75	3,981
Dutch	1	2,224	3,807	3,623	2,229	2,780.00	1,646
Totals	9	32,318	39,832	51,904	32,712	40,397.50	28,927
From Cristobal to West Coast of South America:							
British	5	3,766	5,667	7,273	4,197	4,707.50	1,031
Peruvian	2	3,021	5,910	9,361	5,100	3,776.25	2,433
Chilean	1	1,463	2,577	2,553	1,600	1,828.75	835
United States	1	336	350	615	372	420.00	136
Totals	9	8,586	14,504	19,802	11,269	10,732.50	4,435
From Europe to West Coast of United States:							
United States	5	23,424	26,812	33,017	23,354	28,908.50	19,212
Danish	1	4,473	5,588	7,014	4,460	5,591.25	2,200
British	1	3,669	4,592	5,596	3,553	4,586.25	3,000
French	1	897	1,028	1,509	794	1,121.25	1,000
Totals	8	32,463	38,020	47,136	32,161	40,207.25	25,412
From East Coast of Mexico to West Coast of South America:							
United States	4	16,605	21,480	26,242	15,852	20,756.25	32,900
Norwegian	2	8,881	10,203	13,981	8,838	11,101.25	18,300
British	1	4,645	5,311	7,270	4,513	5,806.25	9,600
Totals	7	30,131	36,994	47,493	29,203	37,663.75	60,800
From East Coast of Mexico to West Coast of United States:							
United States	4	17,631	19,151	24,967	16,863	21,850.55	34,105
British	1	4,325	4,963	6,533	4,178	5,406.25	9,000
Totals	5	21,956	24,114	31,500	21,041	27,256.80	43,105
From West Indies to Far East:							
Japanese	4	13,974	15,319	19,793	13,770	17,353.00	24,710
From East Coast of United States to Balboa, C. Z.:							
United States	3	18,642	20,657	27,938	18,400	23,063.05	31,047
From East Coast of Mexico to West Coast of Canada:							
United States	3	14,910	15,365	20,111	14,423	17,977.55	26,129
From Cristobal, C. Z., to West Coast of United States:							
United States	3	3,990	4,617	6,355	3,795	4,585.00	1,540
From Cristobal, C. Z., to Central America:							
British	2	1,441	1,610	2,689	1,459	1,801.25	1,233
From Europe to West Coast of Canada:							
Dutch	1	6,852	6,961	9,065	6,871	8,353.20	1,500
Swedish	1	3,386	5,456	5,558	4,246	4,232.50	4,060
Totals	2	10,238	12,417	14,623	11,117	12,585.70	5,560
From East Coast of Canada to Australasia:							
British	1	4,913	5,309	7,995	4,911	6,141.25	5,900
From East Coast of Mexico to Balboa, C. Z.:							
Norwegian	1	4,438	5,085	7,022	4,438	5,547.50	9,600
From East Coast of Mexico to Far East:							
British	1	3,271	3,717	5,167	3,230	4,088.75	6,315
From West Indies to Australasia:							
British	1	2,842	3,446	4,533	2,842	3,552.50	5,900
From East Coast of Canada to South America:							
British	1	1,390	1,595	2,253	1,384	1,148.40	.....
From Europe to Hawaiian Islands:							
Norwegian	1	1,317	1,327	1,425	1,317	1,592.40	1,817
Colombian coastwise:							
British	1	638	706	1,170	654	797.50	178

ATLANTIC TO PACIFIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From West Indies to West Coast of South America:							*Long tons.*
United States	1	609	635	1,185	604	$457.20	.....
From East Coast of United States to Central America:							
United States	1	530	530	701	530	662.50	577
From East Coast of Central America to West Coast of South America:							
Peruvian	1	49	49	62	46	36.75	.....
From West Indies to West Coast of United States:							
United States	1	42	41	61	42	31.50	.....
Grand totals	140	514,468	613,591	784,748	506,842	635,165.10	636,579

PACIFIC TO ATLANTIC.

From West Coast of South America to East Coast of United States:							
United States	8	22,312	29,041	35,673	22,913	$27,890.00	32,045
British	3	9,178	11,855	16,317	9,705	10,243.73	2,903
Norwegian	3	7,411	9,612	11,298	6,989	9,162.30	17,039
Danish	2	6,001	6,861	8,451	5,117	7,501.25	13,700
Japanese	1	2,544	2,921	4,105	2,523	3,180.00	5,500
Totals	17	47,446	60,290	75,844	47,247	57,977.28	71,187
From West Coast of South America to Europe.							
British	10	39,799	48,885	63,126	39,693	49,557.35	60,885
Italian	2	6,865	8,515	13,225	7,707	8,581.25	842
Dutch	2	6,540	10,313	10,587	6,707	8,175.00	15,290
French	1	3,600	4,156	5,788	3,589	4,500.00	7,067
United States	1	834	837	929	823	1,004.40	1,310
Totals	16	57,638	72,706	93,655	58,519	71,818.00	85,394
From West Coast of United States to Europe:							
British	4	15,010	18,302	21,978	13,649	18,762.50	30,087
Norwegian	3	11,744	15,496	18,551	12,698	14,680.00	25,718
Danish	2	9,461	10,963	13,555	9,445	11,826.25	17,266
Dutch	1	4,863	6,066	7,655	4,799	6,078.75	8,950
United States	1	3,472	4,899	5,564	3,472	4,340.00	6,142
Swedish	1	3,430	5,533	5,554	4,225	4,287.50	6,640
Totals	12	47,980	61,259	72,857	48,288	59,975.00	94,803
United States coastwise:							
United States	11	53,351	61,804	77,489	53,726	64,470.64	52,289
From West Coast of South America to Cristobal, C. Z.:							
British	5	3,053	3,705	5,218	3,149	3,816.25	1,317
Peruvian	2	3,021	5,910	9,361	5,100	3,776.25	5,170
Chilean	1	1,463	2,577	2,553	1,600	1,828.75	595
United States	1	336	350	615	372	420.00	727
Totals	9	7,873	12,542	17,747	10,221	9,841.25	7,809
From Australasia to Europe:							
British	8	43,617	51,926	65,030	43,161	54,124.95	56,642
From West Coast of South America to Mexico:							
United States	5	24,772	26,894	35,210	24,753	19,701.03	.....
Norwegian	2	8,881	10,171	14,007	8,842	7,323.12	.....
Totals	7	33,653	37,065	49,217	33,595	27,024.15	.....
From Far East to East Coast of United States:							
Japanese	2	9,353	11,126	14,788	9,163	11,691.25	7,686
British	2	7,586	10,826	12,063	7,443	7,935.35	9,000
United States	1	3,746	4,754	6,040	3,746	4,682.50	2,680
Totals	5	20,685	26,706	32,891	20,352	24,309.10	19,366
From West Coast of United States to Mexico:							
United States	5	23,754	28,380	36,911	23,181	20,433.60	.....
British	1	2,879	3,261	4,722	2,897	2,347.92	.....
Totals	6	26,633	31,641	41,633	26,078	22,781.52	.....
From West Coast of United States to Cristobal, C. Z.:							
United States	4	6,153	7,076	9,759	5,958	7,655.80	2,540

PACIFIC TO ATLANTIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From Balboa, C. Z., to East Coast of United States:							*Long tons.*
United States	3	18,831	20,657	27,666	18,443	$15,016.71	.....
From Australasia to East Coast of United States:							
British	1	4,971	5,470	7,964	4,985	6,213.75	2,000
United States	1	3,836	5,256	6,213	3,836	4,795.00	5,120
Totals	2	8,807	10,726	14,177	8,821	11,008.75	7,120
From West Coast of South America to Azore Islands.[1]							
French	1	5,358	5,408	5,618	3,491	6,489.60	7,500
Norwegian	1	3,533	4,501	4,645	4,501	4,416.25	8,024
Totals	2	8,891	9,909	10,263	7,992	10,905.85	15,524
From West Coast of Canada to East Coast of United States:							
United States	2	6,778	9,610	10,955	6,798	8,472.50	11,050
From West Coast of South America to West Indies.[1]							
Japanese	1	3,607	4,590	4,956	3,500	4,508.75	7,200
Dutch	1	2,518	2,707	3,375	2,574	3,147.50	4,377
Totals	2	6,125	7,297	8,331	6,074	7,656.25	11,577
From West Coast of United States to West Indies:							
United States	2	1,410	1,514	2,006	1,409	1,757.50	730
From West Coast of South America to East Coast of Canada:							
British	2	2,779	3,193	4,510	2,767	3,473.75	5,436
From West Coast of Central America to Cristobal, C. Z.:							
British	2	1,441	1,610	2,689	1,459	1,801.25	740
From Balboa, C. Z., to East Coast of Mexico.							
Norwegian	1	4,438	5,085	7,022	4,438	3,661.20	.....
From West Coast of Canada to Europe:							
United States	1	3,808	4,792	6,038	3,742	4,760.00	5,590
From Far East to West Indies:							
Russian	1	1,504	1,819	2,693	1,511	1,880.00	187
Grand totals	115	409,841	499,227	632,472	410,599	470,371.45	447,984

[1] For orders.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended April 9:

U. S. S. *Satterlee*, structural repairs to after starboard side, deck, and steering gear, and renewing stem, due to collision, miscellaneous small maintenance jobs on main and auxiliary machinery; launch *Vacuum, Jr.*, repairs to port side of house and awning and life-line stanchions where damaged in collision, and overhauling clutch; U. S. submarines *O–12*, *O–13*, and *O–15*, periodical overhaul, including docking, cleaning, and painting bottoms and inside superstructure; renewing deteriorated plates, and frames in superstructure and repacking stern glands, overhauling sea valves and trimming systems, cleaning and coating tanks, miscellaneous small items of adjustment and repairs to machinery; piledriver *No. 198*, installing doublers on both sides from water line to fenders; U. S. tug *Sciota*, testing and cleaning boilers, reboring water ends and renewing plungers in air pumps, manufacturing miscellaneous repair parts for auxiliary machinery; barges *Nos. 137* and *138*, docking, staging, cleaning, and painting bottom, cleaning and painting inside and out, renewing hopper sheathing and strongback sheathing, and rebuilding strongbacks and A-frames, overhauling operating gear; barge *No. 201*, renewing plates, fenders, and deck on one corner where damaged, rebuilding stanchions and roof; concrete pontoons, cofferdamming and repairing broken sides and deck, and repairing roof where damaged by being rammed by steamship *Wolverine State*; barge *No. 47*, repairs to one end, both plate and fenders, where rammed by tug; launch *Coco Solo*, general repairs to engine, clutch, and tail shaft, renew stem, repair monkey rails, and repair copper sheathing; steamships *Lompoc*, cleaning boilers, repairing tubes and tube sheet in preheater, and altering lay-out of the furniture in captain's cabin; *Steel Maker*, opening turbine gear casing for examination; *Favorite*, renewing section of stem and installing new sections of plate in 3 top strakes where damaged by collision.

The following vessels were at the Cristobal shops for repairs during the week ended April 11:

Steamships *Panama*, *Colon*, *Advance*, and *General H. F. Hodges*, minor repairs to engine, deck, and steward departments; U. S. submarine *O–14*, renew battery and hull ventilation ducts; make and install new anchor shaft, etc.; steamship *Balboa*, refasten valve-seats on circulating pump; renew 2″ sanitary line on port side, etc.; S. P. *No. 2235*, secure door on deck over galley and door on deck aft; manufacture and install wood deck on forecastle in place of steel deck, etc.; steamship *San Juan*, furnish air; forge one steel key and ring for anchor stops, etc.; *Huallago*, manufacture 1 H. P. piston valve and ring; tug *Atlas*, examine propeller shaft and repair as directed; unship 2 fuel pumps and install 2 new pumps. tanker *Doewa*, alter crew accommodations, manufacture, fit, and install steel water-tight doors as per plan furnished; examine and repair gravity tank valves, etc.; U. S. S. *Hannibal*, electric weld back connections in 6 furnaces; steamships *Caribbean*, cut 3 floor plates for fireroom; make rod for drawing piston in pump; fit and install drip pan under dynamo; *Manavi*, rebore stem end of Weir's pump; dry dock, clean, and paint; manufacture and install new funnel, etc; schooners *Astoria*, *Chiquimula*, steamships *Orcoma*, *Solano*, *Pacifico*, *Ebro*, *S. C. T. Dodd*, *Cartago*, *Tyne*, dredge *No. 86*, launch *Naos*, minor repairs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending April 9, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
City of Para	Pacific Mail Steamship Co		April 3		785
Gen. G. W. Goethals	Panama Railroad Steamship Line		April 5		476
Laura C. Hall	Pacific Metals Corporation	April 3	April 4	[1] 197	(3)
Jamaica	Pacific Steam Navigation Co	April 3	April 5	12	68
Tyne	Pacific Steam Navigation Co	April 3	April 9	85	338
Salvador	Pacific Steam Navigation Co	April 3		361	
Saint Jean	French Line	April 4	April 5	218	(3)
Alkmaar	Royal Netherlands W. I. Mail	April 4	April 6	209	(3)
Cartago	United Fruit Co	April 4	April 7	855	178
Atenas	United Fruit Co	April 6	April 6	(2)	7
Point Judith	Pacific Mail Steamship Co	April 6	April 7	388½	265
Halway	Columbus Shipping Co., Inc	April 6	April 8	3,928	(3)
Advance	Panama Railroad Steamship Line	April 7		1,116	
Point Adams	Pacific Mail Steamship Co	April 7	April 7	158	(3)
Quilpue	Pacific Steam Navigation Co	April 7	April 8	32	630
Manavi	Pacific Steam Navigation Co	April 7		49	
Selandia	East Asiatic Co	April 8	April 9	86	33
Calamares	United Fruit Co	April 8	April 9	360	26
Huasco	Chilean Steamship Line	April 9		77	
Electrician	Harrison Line	April 9		370	
Chile	East Asiatic Co	April 9	April 9	(2)	4
Ebro	Pacific Steam Navigation Co	April 9		137	
Colon	Panama Railroad Steamship Line	April 9		1,346	
San Mateo	United Fruit Co	April 9	April 9	140	(3)

[1] Pounds. [2] No cargo discharged. [3] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending April 10, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
City of Para	Pacific Mail Steamship Co	April 3	April 3		3
Laura C. Hall	Pacific Metals Corporation	April 2	April 2	2½	
Laura C. Hall	Pacific Metals Corporation	April 4	April 6		22
Jamaica	Pacific Steam Navigation Co	April 5	April 5		8
Point Judith	Pacific Mail Steamship Co	April 6	April 6	36	
Quilpue	Pacific Steam Navigation Co	April 7	April 7	¼	
Manavi	Pacific Steam Navigation Co	April 7	April 7	1	
Point Adams	Pacific Mail Steamship Co	April 7	April 8	8	20
Florence Olson	Oliver J. Olson	April 7	April 8	242	
Halway	United States Shipping Board	April 8	April 10	4,102	
San Juan	Pacific Mail Steamship Co	April 9	April 10	10	
Circassian Prince	West India Oil Co	April 9		1,500	

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, April 9, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Ohioan	2	18.02	3	6.10	3	13.09	3	13.58	American	American-Hawaiian Line	407.0	53.7	21.0	New York	Los Angeles	General	2,525	7,106	5,066
City of Para	3-28	20.40	3	6.15	3	14.25	3	16.52	American	Pacific Mail Steamship Co	345.0	38.6	17.7	Cristobal	San Francisco	General	786	3,739	2,459
Tisnaren	3	6.36	3	8.15	3	15.48	3	18.00	Swedish	Rederiaktieb Transatlantic	436.8	56.2	16.0	Hamburg	Sydney	Ballast	.....	7,601	5,346
Australglen	3	7.15	3	9.05	3	16.40	3	21.40	British	Commonwealth Government	386.0	52.3	23.6	Cienfuegos	Sydney	Sugar	5,780	4,722	3,385
Helikon	2	21.07	3	11.10	3	18.35	3	19.30	Norwegian	Bruusgaard Kiosterud	280.5	40.0	18.8	New York	Valparaiso	Oil and iron	1,800	2,304	1,493
West Kedron	3	1.45	3	12.15	3	20.18	3	21.40	American	United States Shipping Board	410.5	54.3	24.4	Antwerp	Los Angeles	General	7,363	6,572	4,900
Matoppo	3	9.25	3	12.40	3	21.10	3	22.20	British	Ellerman & Bucknall	400.5	52.0	24.0	New York	Australia	General	5,920	5,853	4,285
Garfield	3	12.54	3	13.10	3	21.50	4	7.10	American	W. R. Grace & Co	299.4	45.0	19.0	New York	Callao	Gen., iron, rails	1,993	3,228	2,010
S. C. 284	.....	.....	3	9.08	3	16.30	.....	.....	American	United States Navy	.....	.....	.....	Cristobal	Balboa	.....	.....	.....	.....
Mount Berwyn	3	11.15	4	6.20	4	13.52	4	14.55	British	H. E. Moss & Co	400.3	52.0	22.5	Marseilles	Vancouver	Sugar, general	5,413	5,783	4,008
Argosy	3	20.36	4	6.25	4	14.24	4	15.22	American	Wessel Duval & Co. (S. B.)	390.0	54.0	24.0	New York	Valparaiso	General	5,827	6,161	4,433
Argun Maru	4	6.39	4	7.20	4	15.55	4	20.10	Japanese	Osaka Shosen Kaisha	415.0	55.0	21.6	Hamburg	Kobe	General	4,412	7,209	5,294
Laura C. Hall [2]	3	$8.30	4	10.00	4	16.42	6	15.20	British	Pacific Metals Transportation Co	82.0	25.6	9.0	Cristobal	Buenaventura	Ballast	.....	130	69
Colin H. Livingstone	4	10.55	4	11.25	4	18.52	5	13.05	American	United States Transport Co	402.6	53.2	26.6	Mobile	Seattle	General	7,916	6,586	4,855
City of Winchester	4	18.23	5	6.15	5	13.49	5	14.50	American	Ellerman Line, Ltd	456.1	57.9	28.6	New York	Sydney	General	6,500	8,783	6,603
Ypres Maru	4	20.07	5	6.29	5	14.59	5	16.00	Japanese	Suzuki & Co	425.0	53.0	28.5	Matanzas	Yokohama	Sugar	9,000	7,164	5,430
City of Victoria	4	15.45	5	7.13	5	15.30	5	16.25	British	British-Canadian S. S. Co	411.5	54.1	15.6	Liverpool	Vancouver	Ballast	.....	6,612	4,998
Jamaica	3	23.58	5	9.58	5	16.54	5	22.30	British	Pacific Steam Navigation Co	220.0	34.0	11.6	Cristobal	Tumaco	General	311	1,187	622
Saint Jean	4	6.50	5	11.35	5	18.58	5	21.13	French	French Line	417.0	50.6	17.0	Havre	Coronel	General	503	5,849	4,031
Terrier	5	12.47	5	13.10	5	21.12	5	22.30	Norwegian	W. Wilhelmsen	490.0	52.0	24.6	Norfolk	Valparaiso	Coal	6,739	5,631	4,121
Alkmaar	4	21.05	6	6.52	6	14.29	6	15.20	Dutch	Royal Netherlands W. I. Mail	440.0	62.6	17.0	Hamburg	Valparaiso	General	1,255	9,505	6,807
Australia	6	6.05	6	6.53	6	15.22	7	7.28	British	British-India Steam Nav. Co	482.0	62.7	26.0	Barry	Wellington	Coal	7,876	9,453	6,544
Henry S. Grove	7	7.02	7	7.35	7	14.52	7	15.55	American	A. G. & P. S. S. Corp. (S. B.)	494.0	54.0	20.6	Philadelphia	Los Angeles	General	4,300	6,755	4,688
Rotarian	7	10.13	7	10.30	7	17.54	7	18.45	American	Swayne & Hoyt (S. B.)	399.0	53.0	23.6	Montevideo	San Francisco	General	6,032	5,660	4,174
Point Adams	7	7.20	7	12.10	7	19.27	8	15.00	American	Pacific Mail Steamship Co	289.0	44.0	20.6	Baltimore	San Francisco	Gen., pipe, steel	2,878	2,899	1,971
Murla	7	13.26	8	6.20	8	13.42	8	14.30	German	Roland Steamship Line	269.0	42.0	15.0	Bremen	Corral	General	1,600	2,188	1,361
Halway	6	18.19	8	6.25	8	13.39	.....	.....	American	Columbus Shipping Co. (S.B.)	435.0	56.0	28.0	New Orleans	Balboa	Fuel oil	10,000	7,643	5,319
West Kasson	8	21.20	8	7.25	8	15.40	8	16.45	American	Pacific Mail S. S. Co. (S. B.)	410.0	54.0	24.0	Norfolk	San Francisco	Coal	7,256	6,547	4,864
Mahia	8	7.26	8	7.50	8	16.34	9	19.42	British	Shaw, Saville & Albion Co	477.0	62.0	28.0	Barry	Pt. Chamlers	General	4,867	11,026	7,912
Mineola	8	7.36	8	8.27	8	17.25	8	18.20	American	W. R. Grace & Co	298.6	40.0	20.9	New York	Pimenel	General	2,898	2,835	1,822
Royal Star	7	14.58	8	9.50	8	17.32	8	18.27	British	Blue Star Line	450.0	58.5	25.4	Liverpool	Lyttleton	Ballast	.....	8,561	5,815
Iris	8	1.35	8	12.10	8	20.00	8	20.55	American	Pacific Transport Co	304.0	38.0	22.6	New Orleans	San Francisco	General	2,200	3,030	2,021
Vancouver [3]	6	16.15	9	6.00	9	13.58	9	16.00	Norwegian	Akitsiselkepet Wood	199.0	40.0	12.0	Buenos Aires	Pt. Townsend	Ballast	.....	988	854
Australcrag	8	11.47	9	6.40	9	14.45	9	16.05	British	Australian Government	370.0	53.0	20.0	Ghent	Auckland	Super-phosphate	3,960	4,774	3,446

[2] Motor schooner.

[3] Schooner.

Tredinnick	8	14.10	9	7.38	9	15.50	9	17.15	British	Hain Steamship Line	400.1	52.1	25.2	Sabine	Melbourne	Sulphur	6,600	5,987	4,385
Ionie	8	7.31	9	8.00	9	16.56	9	18.15	British	Oceanic Steam Navigation Co.	500.5	63.3	30.0	London	Wellington	General	4,500	12,872	9,577
Selandia [3]	8	8.24	9	10.29	9	18.25	10	13.15	Danish	East Asiatic Steamship Co.	370.4	53.2	16.3	Antwerp	Valparaiso	General	3,000	5,441	4,090
Pennsylvanian	9	12.08	9	12.25	9	22.07	9	11.14	American	American-Hawaiian Line	407.7	53.7	17.0	New York	San Francisco	General	1,400	.....	.....
City of Brisbane	9	6.42	9	12.42	9	21.05	10	1.27	British	Ellerman Lines	462.7	58.8	28.0	New York	Yokohama	General	10,360	9,392	7,039

[3] Motor ship. Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Lompoc	1	12.30	7	6.56	7	17.05	7	17.05	British	C. T. Bowring	435.0	55.0	17.0	Taltal, Chile	Good Hope, La	Ballast	.....	7,488	5,342
Laura C. Hall	2	19.00	3	9.43	3	17.30	4	10.00	British	Pacific Metals Corporation	81.0	25.6	9.0	Buenaventura	Cristobal	Spiecs	2½	130	69
Comeric	3	6.00	3	7.45	3	19.00	3	20.55	British	Andrew Weir & Co	412.0	55.5	27.0	Caleta Colosa	Newport News	Nitrate	9,700	7,186	5,335
Deuel	3	6.30	3	12.13	3	20.02	3	20.03	American	United States Shipping Board	410.0	54.2	24.0	Port Sydney	Southampton	Lumber	5,208	6,693	4,943
Marieopa	3	6.45	3	8.00	3	19.03	3	20.57	Norwegian	W. Wilhelmsen	425.5	57.0	21.0	Antofagasta	Tampico	Ballast	.....	6,996	5,108
Salvador	3	11.25	3	12.29	3	20.57	11	11.05	British	Pacific Steam Navigation Co.	215.0	33.0	13.6	Champerico	Cristobal	Coffee, general	369	1,213	692
S. C. T. Dodd	3	13.00	4	9.29	4	16.35	4	16.35	American	Standard Oil Co. of California	425.0	57.2	20.0	San Francisco	Baton Rouge	Ballast	.....	7,762	5,380
Santa Olivia	3	16.10	4	6.31	4	15.20	4	15.58	American	Atlantic & Pacific Steamship Co.	404.6	53.9	26.2	Talcahuano	New York	.....	.....	6,736	4,883
W. S. Miller	4	6.40	4	9.40	4	17.15	4	17.15	American	Standard Oil Co. of California	435.0	56.2	29.0	San Francisco	Philadelphia	Lubricating oil	9,608	7,440	5,045
Atlantica	4	22.00	5	8.06	5	18.08	5	20.27	French	French Government	378.1	52.3	23.0	Pisagua	Norfolk	Nitrate	6,120	5,145	3,741
Rio Grande	5	6.15	5	8.11	5	17.10	5	18.25	Norwegian	Nordenfjeldske Steamship Co.	360.3	52.1	23.6	Portland, Oreg.	Leith	Flour	5,742	5,137	3,767
Point Judith	5	15.00	6	6.31	6	14.06	7	15.00	American	Pacific Mail Steamship Co.	289.0	44.2	20.6	San Francisco	Baltimore	General	2,380	2,895	1,982
Everest	5	15.45	6	7.38	6	16.15	7	21.22	British	J. E. Murrell & Sons	289.8	42.2	18.6	San Antonio	Chrome, N. J.	Copper ore	3,000	2,302	1,595
Caribbean	6	.....	5	11.28	5	18.40	.....	.....	American	Panama Railroad Steamship Line	288.0	47.6	11.6	Balboa	Cristobal	.....	.....	2,354	478
Opawa	4–6	10.30	6	11.31	6	6.50	6	22.05	British	New Zealand Shipping Co.	460.0	60.2	31.3	Auckland	London	Frozen, general	6,419	9,967	6,936
Quilpue	6	18.00	7	6.28	7	16.27	8	5.40	British	Pacific Steam Navigation Co.	360.0	46.2	16.0	Guayaquil	New York	.....	.....	4,742	3,023
Steel Maker	6	22.30	8	6.43	8	17.06	8	17.06	American	United Steel Products Co.	395.5	55.0	27.0	Vancouver	London	General	7,950	7,285	5,256
Steel Worker	6	22.45	7	7.51	7	17.55	8	17.35	American	Isthmian Steamship Line	424.2	56.2	25.6	Vancouver	New York	Lumber, general	5,225	7,539	5,495
Manavi	7	7.30	7	9.09	7	19.31	.....	.....	British	Pacific Steam Navigation Co.	216.0	35.1	11.0	Guayaquil	Cristobal	Produce	49	1,357	884
Blossom Heath	7	9.09	7	11.06	7	19.31	7	21.05	British	Steam Nav. Co. of Canada	400.0	52.0	27.6	Taltal	Cristobal	Nitrate	8,250	6,005	4,225
Yorba Linda	7	17.40	8	6.26	8	16.14	8	16.14	American	General Petroleum Co.	435.0	56.0	21.0	Tocopilla	Tampico	Ballast	.....	7,642	5,364
West Togus	7	18.00	8	7.33	8	17.57	8	18.10	American	United States Shipping Board	409.8	54.2	20.6	Seattle	Boston	Lumber, general	4,670	6,589	4,838
West Katan	8	7.50	8	14.58	8	21.52	9	3.03	American	United States Shipping Board	410.5	54.3	25.0	Seattle	Hamburg	Foodstuffs, etc.	6,678	6,573	4,901
Chile	8	6.33	9	6.36	9	18.43	9	20.20	Danish	East Asiatic Co.	425.3	55.2	27.7	Portland	London	General	8,900	4,065	2,668
Huasco	8	4.4	9	6.42	9	15.13	.....	.....	Chilean	C. S. A. de V.	378.9	44.0	19.0	Valparaiso	Cristobal	General	77	4,552	3,182
Bradford	9	8.50	9	9.43	9	19.24	10	12.50	American	Standard Oil Co.	426.9	54.6	21.0	Antofagasta	Tampico	Ballast	.....	7,318	5,458
Chiquimula	9	9.1	9	10.25	9	20.22	.....	.....	American	Chiquimula Shipping Co. of N. Y.	176.3	36.1	19.0	La Union	Baltimore	Ballast	.....	716	530
Ruahine	9	10.00	9	11.04	9	21.25	10	12.45	British	New Zealand Shipping Co.	480.6	60.3	26.6	Wellington	England	Frozen prod., etc.	5,030	11,197	8,322

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
April 3	Atenas	United Fruit Co.	New Orleans and wayports.
April 4	Megantic	White Star Line	New York via wayports.
April 4	Cartago	United Fruit Co.	New Orleans.
April 5	S. C. T. Dodd	Standard Oil Co.	High seas.

*DEPARTURES.

Date.	Vessel.	Line.	For—
April 3	Atenas	United Fruit Co.	Bocas del Toro.
April 4	Megantic	White Star Line	New York via wayports.
April 5	Gen. G. W. Goethals.	Panama Railroad Steamship Line	New York via Haiti.
April 6	Atenas	United Fruit Co.	New Orleans.
April 7	S. C. T. Dodd	Standard Oil Co.	Baton Rouge.

(Continued on page 535, column 2.)

Weather Conditions in March, 1921.

The rainfall for the month was generally below normal everywhere except in the Pacific section, the heavy rain on the 13th on the Pacific Coast, causing considerable excess in the monthly totals at Balboa, Balboa Heights and Miraflores. Totals in the Canal Zone and vicinity ranged from 0.03 inch at Juan Mina to 3.29 inches at Balboa. The greatest amount of rainfall recorded on any one day was 2.24 inches at Balboa on March 13.

The estimated rainfall over Gatun Lake watershed was 0.69 inch, compared with a 11-year mean of 0.80 inch; over the Chagres River watershed area above Alhajuela, it was 1.07 inches, compared with a 20-year mean of 1.08 inches.

The atmospheric pressure and the evaporation were above normal, while the relative humidity, daytime cloudiness, and surface temperature of the sea were below the average. The air temperature was slightly below normal everywhere except on the Atlantic Coast, where it was above the average. The wind movement was approximately normal on the Pacific Coast and over the interior, but above the normal on the Atlantic Coast.

A few light fogs were observed at interior stations, all of which lifted or were dissipated by 7.30 a. m.

Seismic tremors were recorded on the 12th, 21st, and 28th.

Gatun Lake hydrology—Mean elevation of Gatun Lake, 84.57 feet; maximum, 85.31 feet on the 1st; minimum, 83.76 feet on the 31st; evaporation from Gatun Lake surface, 7.222 inches; rainfall on Gatun Lake drainage basin, 0.69 inch. The total yield of Gatun Lake watershed was 0.78 inch on the watershed and amounted to 113 per cent of the rainfall.

Climatological conditions at the representative stations are summarized in the following table:

Stations.	Pressure (reduced to mean of 24 hours).	Temperature.					Mean relative humidity.	Precipitation.			Wind.				
		Mean.	Maximum.	Date.	Minimum.	Date.		Total inches.	Station average.	Days with .01 inch or more.	Total movement (miles.)	Prevailing direction.	Maximum velocity in miles.	Direction.	Date.
Balboa Heights	29.860	80.8	92	Mar. 10	70	Mar. 3	75.8	2.98	0.72	6	6,224	N.W.	25	N. W.	Mar. 9
Colon	29.874	81.8	88	Mar. 10	72	Mar. 5	76.8	.98	1.57	8	11,835	N.	30	N. E.	Mar. 30
Gatun	.....	80.2	89	Mar. 22	71	Mar. 5	....	.79	1.92	9	6,570	N.	27	N.	Mar. 14
Gamboa	.....	79.1	91	Mar. 29	69	Mar. 3	....	.09	.69	3	5,742	N.E.	27	N. E.	Mar. 24

Total Eclipse of the Moon on April 22.

The Chief Hydrographer authorizes the following:

A total eclipse of the moon will occur in the early morning of April 22. While partial eclipses are common, a total eclipse is comparatively rare.

If the moon passes through the center of the earth's shadow the total eclipse will last approximately 2 hours, but in this case the moon passes somewhat to one side of the center and the period of totality is only 41 minutes. The time of occurrence in 75th meridian time (local time for the Canal Zone) is as follows:

Moon enters penumbra (gradual darkening of moon's disk)	11.57 p. m., April 21.
Moon enters shadow	1.32 a. m., April 22.
Total eclipse begins	2.24 a. m., April 22.
Middle of eclipse	2.44 a. m., April 22.
Total eclipse ends	3.05 a. m., April 22.
Moon leaves shadow	4.26 a. m., April 22.
Moon leaves penumbra	5.32 a. m., April 22.

As the moon sets the morning of April 22 at 5.29 a. m., it is well above the horizon through all important phases, and approximately 45 degrees above the western horizon at the beginning of the total phase.

An eclipse of the moon differs in one respect from a solar eclipse. In a total eclipse of the sun the moon's shadow describes a narrow path on the earth's surface, while in a lunar eclipse, if the moon passes wholly within the earth's shadow, it is totally eclipsed no matter where the observer may be.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to, "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

New Tariff and Regulations for Public Passenger Conveyances.

New tariff and regulations governing public passenger conveyances in the Canal Zone and in the cities of Panama and Colon, established by Executive Order of the President and by decrees signed by the alcaldes of Panama and Colon, will go into effect May 1, 1921.

The new system effects a departure from previous practices in establishing a system of fare zones. This is explained in the following sections quoted from the Executive Order:

SECTION I. Charges over the scheduled routes set forth in Schedules A and B and made a part hereof, shall be based on a ZONE FARE of $0.15 U. S. currency for one adult passenger for continuous travel between any two points in any one fare zone without entering into another zone. This ZONE FARE will be called the base rate of fare.

For the purpose of interpreting these regulations, all persons over 12 years of age shall be called "adult passengers," and all persons under 12 years shall be called "children."

An increase of 50 per cent of the base rate will be allowed for each additional adult passenger, provided that this increase shall not be less than $0.10 for each additional adult passenger. These charges shall apply to all persons except children, under 6 years of age accompanied by adult, who shall be carried free, and children between 6 and 12 years of age accompanied by adult, whose fare shall be one-half the tariff rate; children regardless of age, not accompanied by adult shall be charged the full tariff rate and where children under 6 years are accompanied by adult, one-half fare shall be charged for each child in excess of two.

SEC. II. The following examples will show method to be followed in figuring fares:

For two adult passengers carried between two points within the same fare zone, the fare will be the base rate of $0.15 for first passenger, plus minimum increase of $0.10 for second passenger, or a total of $0.25 for both passengers.

For three adult passengers carried between two points within same fare zone, the fare will be the base rate of $0.15 for first passenger, plus minimum increase of $0.10 for each of the two additional passengers, or a total of $0.35 for the three passengers.

For four or more passengers within same fare zone the rate will be figured in the same manner as shown in last two paragraphs.

SEC. III. For continuous travel between two points in different zones, the same method will also be followed, for example:

For one adult passenger the fare will be the base rate of $0.15 for the first zone, plus the base rate of $0.15 for each additional zone entered or crossed.

For more than one passenger carried between points in different zones the fare will be the total base rate for one passenger at end of trip, plus 50 per cent of total base rate for each additional passenger.

Thus, the fare for two or more passengers carried from one point in a zone to a point in an adjoining zone would be the base rate of $0.15 for one passenger for first zone, plus the base rate of $0.15 for same passenger in second zone, or total base rate of $0.30 for first passenger. For second passenger there will be added the 50 per cent of the total rate of $0.30, or a total of $0.45 for two passengers; for third passenger, add again 50 per cent of the total base rate of $0.30, making total fare of $0.60 for the three passengers.

SEC. IV. A base rate is established for travel between fare zones and certain specified interior locations in Canal Zone and Republic of Panama, outside of or not included in fare zones, base rate of fare of which will be for one passenger plus 50 per cent of base rate for each additional passenger, with the same provisions as to half-fares (rates for children); travel between established fare zones and beyond the interior locations in Canal Zone and Republic of Panama, specified in Schedules A and B, will be at hourly rate or by special agreement.

Where a trip begins or ends at a point beyond the established fare zones, at a location not specified in Schedules A and B, but not beyond the farthest location specified, the fare shall be the fare to and from the next farthest specified location. For example: Travel to and from Balboa fare zone to and from a point between the specified location of Diablo, the fare shall be the schedule fare between Balboa fare zone and Diablo interior location.

SEC. V. Any half-fares as established by regulations to be figured on same basis as shown in preceding sections, as an adult passenger and child between 6 and 12 years for travel between two points in same zone, base rate fare of $0.15 for adult plus one-

half of minimum fare of $0.10 for child passenger or $0.05, or total of $0.20 for the two passengers; travel between points in different zones where half-fares are allowed, to be figured in same manner.

The southern end of the Canal Zone, and adjacent areas in the city of Panama, designated the southern district, are divided into the following zones: First Panama City zone, Ancon zone, Balboa zone, Heights zone, La Boca zone, 2d Panama City zone, 3d Panama City zone; and outlying points are covered by a "specified location table." These points are Diablo, Corozal, Fort Clayton, filtration plant and Miraflores Locks, Pedro Miguel, Paraiso, Las Sabanas Police Station, and the Panama Golf Club. The northern end of the Canal Zone, and adjacent areas in the city of Colon, designated the northern district, are divided into the following fare zones: Colon City, Cristobal, Piers, Mount Hope, with a specified location table for trips to France Field, Coco Solo and Fort Randolph, Brazos Brook, Mindi Dairy, Fort Davis, New Gatun, and Gatun.

Pamphlet containing the designations and limits of the zones, tariffs, regulations, etc., printed in English and Spanish, with maps, is being printed. Each driver of a public conveyance for passengers will be required to carry one in his vehicle for reference. Additional copies may be obtained from the Police and Fire Division of The Panama Canal.

Diseases Carried by Insects.

The Chief Health Officer authorizes the following:

Frequent warnings have appeared in these pages regarding the danger of contracting malaria and other tropical diseases by those who visit the unsanitated areas of the Zone and the Republic. Probably all of our readers are aware of the relation of mosquitoes to yellow fever and malaria, of the rat and its fleas to bubonic plague, and of the common body louse to typhus. But there are many other diseases that are carried from man to man or from animals to man by insects.

Recently five young employees of the Balboa shops went on an excursion into the interior and spent a night in a vacant shack back of a Chinaman's store at Arraijan. Following their return, four of them were admitted to Ancon Hospital where they were found to be suffering from relapsing fever, a serious and painful, if not usually fatal illness. A few days later four young boys of Pedro Miguel also went to Arraijan, and slept in the same shack. Two of them were subsequently sent to Ancon Hospital with relapsing fever and one of these had malaria also.

Relapsing fever is known to be conveyed to man by some species of ticks and by body lice. Bedbugs also are strongly suspected.

The entomologist of the Board of Health Laboratory was sent to Arraijan to make an investigation. He found in the shack where these boys had slept a rude bed made of dried bamboo. The bed was fairly alive with ticks—hundreds of them. Quite a number were collected and brought back to the laboratory for identification and experimental work to determine if they are of the type that really convey the disease. The laboratory work has not yet been completed, but the evidence above presented is sufficient to demonstrate once more that such trips to the uncontrolled or unsanitated areas of the Isthmus are fraught with dangers and that even those who take precautions against mosquito bites may be exposed to attack by other insects equally dangerous.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z. (telephone 286).

Agricultural statistician, $2,000 to $3,600 a year; junior agricultural statistician, $1,800 to $2,250 a year (male and female); form 1312; age, 21 but not 45 years; vacancies exist in the Bureau of Crop Estimates, Department of Agriculture, May 11, 1921.

Assistant keeper, $75 a month (male and female); form 1312; announcement No. 190; age, 18 but not 40 years; vacancies exist in the National Zoological Park, Washington, D. C.; April 27, 1921.

Assistant in charge of reservations, $3,000 to $3,600 a year (male and female); form 2118; age, 25 but not 50 years; vacancies exist in the Bureau of Biological Survey, Department of Agriculture, Washington, D. C.; May 17, 1921.[1]

Clerk-colorist, $1,100 a year (male and female); form 304; age, 18 years and over; vacancies exist in the States Relation Service, Department of Agriculture, Washington, D. C.; May 11, 1921.

Engineer draftsman, $1,500 to $2,100 a year (male and female); form 1312; age, 22 but not 55 years; vacancies exist in the Bureau of Mines; Washington, D. C., Denver, Col.; May 17, 1921.[1]

Fireman, $720 a year (male and female); form 1800; announcement No. 184; age, 20 but not 50 years; vacancies exist in the Department of the Interior, Washington, D. C.; April 26, 1921.[1]

Laboratory aid in forest pathology, $840 to $1,200 a year (male and female); form 304; announcement No. 181; age, 16 but not 45 years; vacancies exist in the Bureau of Plant Industry, Department of Agriculture, San Francisco, Cal.; June 8, 1921.[1]

Lithographic map engraver, $1,200 to $1,500 a year (male and female): form 1800; announcement No. 183; age, 21 but not 40 years; vacancies exist in the Geological Survey, Washington, D. C.; July 1, 1921.[1]

Lithographic press helper, $700 a year (male and female); form 304; announcement No. 186; age, within reasonable age limits; vacancies exist in the Coast and Geodetic Survey; May 11, 1921.

Map printer, $1,320 a year (male and female); form 1800; announcement No. 185; age, 24 but not 50 years; vacancies exist in the Geological Survey, Washington, D. C.; July 1, 1921.[1]

Mechanical engineer, $3,000 a year (male and female); form 1312; age, below 50 years; vacancies exist in the Bureau of Entomology, Department of Agriculture, Tallulah, La.; May 17, 1921.[1]

Negative cutter, $4.25 per diem (male and female); form 1800; announcement No. 182; age, 20 but not 50 years; vacancies exist in the Geiological Survey, Washington, D. C.; July 1, 1921.[1]

Station librarian, $1,800 a year (male and female); form 1312; age, 25 but not 50 years; vacancies exist under the Navy Department; May 11, 1921.[1]

Aid, Division of Ethnology (male and female); $100 per month; form 1312; age, 20 but not 35 years; vacancies exist in the National Museum, Washington, D. C.; May 11, 1921.[1]

Agricultural assistant, $2,250 to $3,000 a year (male and female); form 2118; age, 20 but not 40 years; vacancies exist in the Bureau of Entomology, Department of Agriculture; May 31, 1921.

Electrical and mechanical aid, $10.80 per diem; announcement No. 132-amendment; salary changed from $7.60 to $10.80 per diem.

Fish culturist, $900 to $1,200 a year; form 1312; announcement No. 168 (male and female); age, 20 but not 45 years; vacancies exist in the Bureau of Fisheries; April 27, 1921.

Supervising mining engineer, $4,000 to $5,000 a year; mining and metallurgical engineer, $4,000 to $5,000 a year; illuminating gas engineer, $3,240 a year; assistant refinery engineer, $2,760 to $3,000 a year; mineral technologist, $2,400 to $4,000 a year (male and female); form 2118; announcement No. 176; age, within reasonable age limits; vacancies exist in the Bureau of Mines, Department of the Interior; April 26, 1921.[1]

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[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Civil Service Examination.

Stenographer and typist (male and female); usual entrance salaries, $137.50 and $158.33 a month; form 1312; announcement No. 484-amended; age, 18 but not 45 years; vacancies exist in The Panama Canal Service; April 16, 1921.

Deceased and Insane Employees.

The estates of the following deceased or insane employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

DECEASED.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Joseph Emanuel Boyd	45479	Jamaica	Panama	Health Department	April 2, 1921.
James Clarke	53704	Barbados	Camp Bierd	Coaling Station	April 6, 1921.
Nicholas Graham	34467	Jamaica	Camp Bierd	Supply Department	March 23, 1921.
Henry Simeon Williams	20262	Jamaica	Panama	Supply Department	March 24, 1921.

INSANE.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of commitment.
James Fyffe (Fye)	53777	Jamaica	Camp Bierd	Coaling Station	March 19, 1921.

Official Circulars.

President of Panama Railroad Company.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 4, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

Col. Jay J. Morrow, Governor of The Panama Canal, has been unanimously elected by the Board of Directors of the Panama Railroad Company as President of the company, succeeding Brig.-Gen. Chester Harding, resigned.

JNO. H. SMITH,
Acting Executive Secretary.

Acting Member of Complaints Board.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 11, 1921.

To all concerned—Mr. H. J. White, having been nominated by the Metal Trades Council, will act as a member of the Complaints Board, effective this date, and during the absence of Mr. H. A. McConaughey.

JAY J. MORROW,
Governor.

Rates of Pay.—Gold Roll.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 9, 1921.

To employees whose wages are affected by Building Trades rates (bricklayers, carpenters, metal lathers, painters, plasterers, plumbers, wiremen and related classes, operators and related classes, and others concerned):

Reports from the United States indicate that a reduction is being made in rates of pay in the building trades. If the rates authorized by the Construction Service of the United States Army are reduced, a reduction in rates paid by The Panama Canal will be made automatically.

It has been impracticable heretofore to obtain authentic report of rates paid in the United States within the month in which an adjustment is made; and therefore the rates have been given retroactive effect. Reductions will be effective retroactively, the same as increases were.

The Panama Canal would find it impracticable to pay employees at a certain rate and then collect back from them the difference when a lower rate had been determined. It has, therefore, been decided to establish a schedule of rates 10 cents an hour less than those in effect, with the understanding that when the correct rates for a period are determined, such back pay as may be due will be paid to the men who worked during that period, whether or not they are still in the employ of The Panama Canal.

It is believed that data will be available before the end of the month on which to determine a correct schedule; and, if so, each employee who works a full month will be paid in full at the rate determined for April 1. Employees who go on leave or who separate from the force before the correct rate is determined will be paid at 10 cents less than the rates authorized for February, March, and now in effect; but any back pay due them when the true rates are determined will be paid to them.

If any employee wishes to ask questions about this he should inquire of his supervisor; or he may telephone to the Board of Rates of Pay, telephone Balboa 1140; or to the Bureau of Statistics, telephone Balboa 1010.

JAY J. MORROW,
Governor.

Traffic Across Pedro Miguel Lock Gates.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 6, 1921.

To all concerned—On account of interference with the transit of vessels using the Canal and of the increase in traffic across the Pedro Miguel lock gates, which renders such crossing dangerous, traffic across such gates is restricted to official motor vehicles on official business only, necessary Army traffic, and the usual foot, horse, and pack traffic. Motor vehicle traffic other than as specified above will be discontinued.

JAY J. MORROW,
Governor.

Act of Congress.—Sundry Civil Appropriation, 1922.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 28, 1921.

CIRCULAR No. 600-77:

The extracts from an Act of Congress quoted below are published for the information of all concerned.

JAY J. MORROW,
Governor.

AN ACT Making appropriations for sundry civil expenses of the Government for the fiscal year ending June 30, 1922, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the fiscal year ending June 30, 1922, namely:

* * * * * * *

WAR DEPARTMENT.

* * * * * * *

QUARTERMASTER CORPS.

* * * * * * *

NATIONAL CEMETERIES: * * * Disposition of remains of officers, soldiers, and civilian employees: For interment, cremation (only upon request from relatives of the deceased), or of preparation and transportation to their homes or to such national cemeteries as may be designated by proper authority, in the discretion of the Secretary of War, of the remains of officers, cadets, United States Military Academy, including acting assistant surgeons and enlisted men in active service, and accepted applicants for enlistment; interment, or of preparation and transportation to their homes, of the remains of civil employees of the Army in the employ of the War Department who died abroad, in Alaska, in the Canal Zone, or on Army transports, * * * $1,000,000: *Provided*, That the above provisions shall be applicable in the cases of officers and enlisted men on the retired list of the Army who have died or may hereafter die while on active duty by proper assignment and also to citizens of the United States who may have died while serving in the armies of the Allies associated with the American forces: *Provided further*, That, in addition to the foregoing sum, the unobligated balance of the appropriation "Disposition of remains of officers, soldiers, and civil employees," for the fiscal year 1921 is made available during the fiscal year 1922 for the above purposes and for the care and maintenance of graves of officers, soldiers, and civilian employees of the Army abroad, and for the preparation and shipment of their remains to their homes, or to national cemeteries.

* * * * * * *

DEPARTMENT OF THE INTERIOR.

SAINT ELIZABETHS HOSPITAL.

For support, clothing, and treatment in Saint Elizabeths Hospital of the insane from the Army, Navy, Marine Corps, Coast Guard, inmates of

the National Home for Disabled Volunteer Soldiers, persons charged with or convicted of crimes against the United States who are insane, all persons who have become insane since their entry into the military and naval service of the United States, civilians in the quartermaster's service of the Army, persons transferred from the Canal Zone, who have been admitted to the hospital and who are indigent, * * * $1,000,000; * * *

* * * * * * *

DEPARTMENT OF COMMERCE.

* * * * * * *

COAST AND GEODETIC SURVEY.

Field expenses: For surveys and necessary resurveys of the Atlantic and Gulf coasts of the United States, including the coasts of outlying islands under the jurisdiction of the United States: *Provided*, That not more than $45,000 of this amount shall be expended on the coasts of said outlying islands, and the Atlantic entrance to the Panama Canal, $104,000;

* * * * * * *

THE PANAMA CANAL.

For every expenditure requisite for and incident to the maintenance and operation, sanitation, and civil government of the Panama Canal and Canal Zone, including the following: Compensation of all officials and employees, including $1,000 additional compensation to the Auditor for the War Department for extra services in auditing accounts for the Panama Canal; foreign and domestic newspapers and periodicals; law books not exceeding $500, textbooks and books of reference; printing and binding, including printing of annual report; rent and personal services in the District of Columbia; purchase or exchange of typewriting, adding, and other machines; purchase or exchange, maintenance, repair, and operation of motor-propelled and horse-drawn passenger-carrying vehicles; claims for damages to vessels passing through the locks of the Panama Canal, as authorized by the Panama Canal Act; claims for losses of or damages to property arising from the conduct of authorized business operations; claims for damages to property arising from the maintenance and operation, sanitation, and civil government of the Panama Canal; acquisition of land and land under water, as authorized in the Panama Canal Act; expenses incurred in assembling, assorting, storing, repairing and selling material, machinery, and equipment heretofore or hereafter purchased or acquired for the construction of the Panama Canal which are unserviceable or no longer needed, to be reimbursed from the proceeds of such sales; expenses incident to conducting hearings and examining estimates for appropriations on the Isthmus; expenses incident to any emergency arising because of calamity by flood, fire, pestilence, or like character not foreseen or otherwise provided for herein; per diem allowance in lieu of subsistence when prescribed by the Governor of the Panama Canal to persons engaged in field work or traveling on official business, pursuant to section 13 of the Sundry Civil Appropriation Act, approved August 1, 1914; and for such other expenses not in the United States as the Governor of the Panama Canal may deem necessary best to promote the maintenance and operation, sanitation, and civil government of the Panama Canal, all to be expended under the direction of the Governor of the Panama Canal and accounted for as follows:

For maintenance and operation of the Panama Canal: Salary of the Governor, $10,000; purchase, inspection, delivery, handling, and storing of material, supplies, and equipment for issue to all departments of the Panama Canal, the Panama Railroad, other branches of the United States Government, and for authorized sales, payment in lump sums of not exceeding the amounts authorized by the injury compensation act approved September 7, 1916, to alien cripples who are now a charge upon the Panama Canal by reason of injuries sustained while employed in the construction of the Panama Canal, $7,250,000, together with all moneys arising from the conduct of business operations authorized by the Panama Canal Act;

For sanitation, quarantine, hospitals, and medical aid and support of the insane and of lepers, and aid and support of indigent persons legally within the Canal Zone, including expenses of their deportation when practicable, and including additional compensation to any officer of the United States Public Health Service, detailed with the Panama Canal as chief quarantine officer, $850,000;

For civil government of the Panama Canal and Canal Zone: Salaries of district judge, $7,500; district attorney, $5,000; marshal, $5,000; and for gratuities and necessary clothing for indigent discharged prisoners, $900,000;

In all, $9,000,000, to be available until expended.

Except in cases of emergency, or conditions arising subsequent to and unforeseen at the time of submitting the annual estimates to Congress, and except for those employed in connection with the construction of permanent quarters, offices, and other necessary buildings, dry docks, repair shops, yards, docks, wharves, warehouses, storehouses, and other necessary facilities and appurtenances for the purpose of providing coal and other materials, labor, repairs, and supplies, and except for the permanent operating organization under which the compensation of the various positions is limited by section 4 of the Panama Canal Act, there shall not be employed at any time during the fiscal year 1922, under any of the foregoing appropriations for the Panama Canal, any greater number of persons than are specified in the notes submitted, respectively, in connection with the estimates for each of said appropriations in the annual Book of Estimates for said year, nor shall there be paid to any such persons during that fiscal year any greater rate of compensation than was authorized to be paid to persons occupying the same or like positions on July 1, 1920; and all employments made or compensation increased because of emergencies or conditions so arising shall be specifically set forth, with the reasons therefor, by the Governor in his report for the fiscal year 1922.

In addition to the foregoing sums there is appropriated, for the fiscal year 1922 for expenditures and reinvestment under the several heads of appropriation aforesaid without being covered into the Treasury of the United States, all moneys received by the Panama Canal from services rendered or materials and supplies furnished to the United States, the Panama Railroad Company, the Canal Zone government, or to their employees, respectively, or to the Panama Government, from hotel and hospital supplies and services; from rentals, wharfage, and like service; from labor, materials, and supplies and other services furnished to vessels other than those passing through the Canal, and to others unable to obtain the same elsewhere; from the sale of scrap and other by-products of manufacturing and shop operations; from the sale of obsolete and unserviceable materials, supplies, and equipment purchased or acquired for the operation, maintenance, protection, sanitation, and government of the Canal and Canal Zone; and any net profits accruing from such business to the Panama Canal shall annually be covered into the Treasury of the United States.

In addition there is appropriated for the operation, maintenance, and extension of waterworks, sewers, and pavements in the cities of Panama and Colon, during the fiscal year 1922, the necessary portions of such sums as shall be paid as water rentals or directly by the Government of Panama for such expeness.

To enable the President to cause an investigation to be made as to the petroleum resources and the production of petroleum in other countries, $35,000.

SEC. 2. That all sums appropriated by this Act for salaries of officers and employees of the Government shall be in full for such salaries for the fiscal year 1922, and all laws or parts of laws

to the extent they are in conflict with the provisions of this Act are repealed.

SEC. 3. Any journal, magazine, periodical, or similar publication which is now being issued by a department or establishment of the Government, may, in the discretion of the head thereof, be continued, within the limitation of available appropriations or other Government funds, until December 1, 1921, when, if it shall not have been specifically authorized by Congress before that date, such journal, magazine, periodical, or similar publication shall be discontinued.

Approved, March 4, 1921.

Act of Congress.—Fortifications Appropriations, 1922.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 29, 1921.

CIRCULAR No. 600-78:

The extracts from an Act of Congress quoted below are published for the information of all concerned.

JAY J. MORROW,
Governor.

AN ACT Making appropriations for fortifications and other works of defense, for the armament thereof, and for the procurement of heavy ordnance for trial and service for the fiscal year ending June 30, 1922, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for fortifications and other works of defense, for the armament thereof, and for the procurement of heavy ordnance for trial and service, for the fiscal year ending June 30, 1922, and for other purposes, namely:

* * * * * * *

PANAMA CANAL FORTIFICATIONS.

For fortifications and armament thereof for the Panama Canal:

ENGINEER DEPARTMENT.

For protection, preservation, and repair of fortifications of the Panama Canal, for which there may be no special appropriation available, including structures erected for submarine-mine defense, and for maintaining channels for access to submarine-mine wharves, $25,000;

For maintenance and repair of searchlights and electric light and power equipment for fortifications, and for tools, electrical and other supplies, and appliances to be used in their operation, $30,000;

For preparation of plans for fortifications and other works of defense, including surveys for roads, Canal Zone, $3,000;

For the purchase and installation of searchlights for the seacoast fortifications on the Canal Zone, $6,250;

For the purchase or reclamation of land required for the defenses of the Panama Canal, $80,000;

CHIEF OF COAST ARTILLERY.

For the construction of fire-control stations, the purchase and installation of accessories therefor, and for subaqueous, sound, and flash ranging apparatus, including their development, $25,000;

For alteration, maintenance, and repair of submarine mine matériel, $10,000;

CHIEF SIGNAL OFFICER.

For operation and maintenance of fire-control installations at seacoast defenses, $15,000;

ARMAMENT OF FORTIFICATIONS.

For the purchase, manufacture, and test of ammunition for seacoast and land defense cannon, including the necessary experiments in connection therewith, and the machinery necessary for its manufacture, $250,000;

For the alteration and maintenance and installation of the seacoast artillery, including the purchase and manufacture of machinery, tools, and materials necessary for the work, and expenses of civilian mechanics, $75,000;

BARRACKS AND QUARTERS.

For continuing the construction of barracks, quarters, storehouses, and other buildings necessary for accommodating the Coast Artillery troops to be stationed in the vicinity of the Panama Canal, including water, sewer, and electrical systems, roads, walks, and so forth, $100,000;

The Governor of the Panama Canal, so far as the expenditure of appropriations contained in this Act may be under his direction, shall purchase needed materials, supplies, and equipment from available surplus or reserve stocks of the War Department;

In all, specifically for fortifications and armament thereof for the Panama Canal, $619,250.

SEC. 2. That all material purchased under the provisions of this Act shall be of American manufacture, except in cases when, in the judgment of the Secretary of War, it is to the manifest interest of the United States to make purchases abroad, which material shall be admitted free of duty.

SEC. 3. That except as expressly otherwise authorized herein, no part of the sums appropriated by this Act shall be expended in the purchase from private manufacturers of any material at a price in excess of 25 per centum more than the cost of manufacturing such material by the Government, or, where such material is not or has not been manufactured by the Government, at a price in excess of 25 per centum more than the estimated cost of manufacture by the Government.

SEC. 4. That expenditures for carrying out the provisions of this Act shall not be made in such manner as to prevent the operation of the Government arsenals at their most economical rate of production, except when a special exigency requires the operation of a portion of an arsenal's equipment at a different rate: *Provided,* That no part of the appropriations made in this Act shall be available for the salary or pay of any officer, manager, superintendent, foreman or other person having charge of the work of any employee of the United States Government while making or causing to be made with a stop watch or other time-measuring device a time study of any job of any such employee between the starting and completion thereof, or of the movements of any such employee while engaged upon such work.

SEC. 5. That no part of the moneys appropriated in each or any section of this Act shall be used or expended for the purchase or acquirement of any article or articles that at the time of the proposed acquirement can be manufactured or produced in each or any of the Government arsenals of the United States for a sum less than it can be purchased or procured otherwise.

SEC. 6. That the Secretary of War is authorized to proceed with the installation of guns and howitzers in such order of priority as he may deem expedient, at places for which appropriations have been, or hereafter may be, made for emplacements for such guns and howitzers.

SEC. 7. That so much of the Fortification Appropriation Act approved July 5, 1884, as pertains to the appointment of a board for the purpose of testing rifled cannon is hereby rescinded.

* * * * * * *

Approved, March 3, 1921.

Sale of Towing Hawser.

Bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., for one used hawser, 2 inches in diameter, galvanized iron, about 2,000 feet long, located at the coaling station, Cristobal, on the basis of first satisfactory offer being given consideration.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 5, 1921.

CIRCULAR No. 288:

Effective April 1, 1921, Mr. George W. Green is designated an accountable official of The Panama Canal, *vice* Mr. D. E. Wright, and as such will account for all nonexpendable property in use by the Division of Municipal Engineering.

ELWYN GREENE,
Acting Auditor, The Panama Canal.

Approved:
JAY J. MORROW,
Governor.

Sailings of Panama Railroad Vessels.

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
BALBOA HEIGHTS, C. Z., April 8, 1921.

To all concerned—The steamship *Panama* will sail from Cristobal for New York direct on Wednesday, April 13, at 3 p. m., instead of on April 14, as previously announced.

The steamship *Colon* will sail from Cristobal for New York, via Port-au-Prince, Haiti, on Thursday, April 14, at 3 p. m.

The steamship *Cristobal* will sail from Cristobal for Norfolk on Saturday, April 16, at 3 p. m.

W. F. FOSTER,
Acting Superintendent.

Sale of Nails and Spikes.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., April 28, 1921, and then opened, for the purchase of all or part of a lot of nails and spikes located at Balboa storehouse. Form of proposal may be had upon application. The Panama Canal reserves the right to reject any or all bids.

March Rainfall for Three Years.

STATIONS.	INCHES. 1919	1920	1921	Station average.	Years of record.	Rainy days, 1921.
Pacific section:						
Balboa	T	0 35	3.29	0.74	22	7
Balboa Heights	T	.09	2.98	.72	23	6
Miraflores	0	.02	1.46	.46	13	3
Pedro Miguel	T	.04	.17	.29	14	2
Rio Grande	0	1.30	.51	.35	17	2
Central section:						
Culebra	T	.81	.36	55	31	2
Camacho	.08	.57	.36	.41	15	3
Empire	.05	.80	.52	.37	16	6
Gamboa	.03	.21	.09	.69	37	3
Juan Mina	.04	1 00	.03	.23	11	1
Alhajuela	.07	.20	.27	.45	22	5
Vigia	.01	.22	.08	.35	13	3
Frijoles	.47	.05	1.07	.57	10	....
Trinidad	.38	.94	.52	1 73	14	7
Monte Lirio	.59	.78	.26	1.98	14	4
Atlantic section:						
Gatun	.59	.71	.79	1 92	17	9
Brazos Brook	.73	.90	1.38	1.97	15	14
Colon	.61	1 08	.98	1.57	52	8
Porto Bello	1 18	1 07	2 57	2 08	10	22
Bocas del Toro	4.23	1.06	4.87	5.27	13	17

MOVEMENTS OF OCEAN VESSELS.—Continued from page 527.

PORT OF CRISTOBAL—continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
April 6	Atenas	United Fruit Co.	Bocas del Toro.
April 7	Crescent ?	H. A. Bodden	San Andres.
April 8	Calamares	United Fruit Co.	New York via Habana.
April 9	Columbia	N. O. & S. A. S. S. Line	Puerto Colombia.
April 9	Panama	Panama Railroad Steamship Line.	New York via Haiti.
April 9	San Mateo	United Fruit Co.	Port Limon.
April 9	Electrician	Harrison Line	Liverpool via wayports.
April 9	Colon	Panama Railroad Steamship Line.	New York via Haiti.

*DEPARTURES.

Date.	Vessel.	Line.	For—
April 7	Cartago	United Fruit Co.	New Orleans via Bocas del Toro and Habana.
April 9	Calamares	United Fruit Co.	New York via Port Limon and Habana.
April 9	Tyne	Royal Mail Steam Packet Co.	Cartagena.
April 9	Columbia	N. O. & S. A. S. S. Line	New Orleans and Port Limon.
April 9	San Mateo	United Fruit Co.	Boston.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—
April 6	Harald	United S. S. Co. of Copenhagen	Guayaquil.
April 7	Florence Olson	Oliver J. Olson	Talara, Peru.
April 9	Circassian Prince	International Petroleum Co.	Talara.

Date.	Vessel.	Line.	For—
April 7	Harald	United S. S. Co. of Copenhagen	Buenaventura.
April 8	Florence Olson	Oliver J. Olson	San Francisco.

*Other than ships passing through the Canal.

Rainfall from March 1 to March 31, 1921, Inclusive.

STATIONS.	Maximum in 1 day.	Date.	Total.
Pacific section:	*Ins.*		*Ins.*
Balboa	2 24	13	3.29
Balboa Heights	2.17	13	2.98
Miraflores	1.15	13	1.46
Pedro Miguel	.14	5	.17
Rio Grande	.50	13	.51
Central section:			
[1] Culebra	.33	14	.36
[1] Camacho	.30	14	.36
Empire	.45	13	.52
Gamboa	.07	5	.09
[1] Juan Mina	.03	9	.03
Alhajuela	.21	10	.27
[1] Vigia	.05	26	.08
[1] Darien	.09	5	.13
Trinidad	.23	10	.52
[1] Monte Lirio	.17	5	.26
Atlantic section:			
Gatun	.34	5	.79
[1] Brazos Brook	.77	5	1.38
Colon	.84	5	.98
[2] Bocas del Toro	1.30	29	4.87
[2] Porto Bello	.69	5	2.57

[1] Standard rain gauge—readings at 4 p. m. daily.
[2] Standard rain gauge—readings at 8 a. m. daily.
Automatic rain gauge at unstarred stations—values, midnight to midnight.

Additions to Commissary Stock.

Dry Goods Section.

Bags, shopping, small (Mochilas), ea $0.88
Bags, shopping, large (Mochilas), ea..... 1.10
Clips, fountain pen, Parker's, ea..... .20
Cloths, Madeira linen, 72", round, ea.... 21.50, $29.15 $34.75, $45.95
Cloths, Madeira linen, 72", square, ea.....31.90, $36.65, $49.45
Cloths, Madeira linen, 20" x 30", oval, ea., $3.25, 3.90
Oil of citronella, P. C., 2-oz. bot..... .20
(Two cents for return of empty bottle.)
Voile, 40", assorted colors, yd..... .46

Grocery Section.

Seed, caraway, P. C., 1½-oz. bot..... .10
(One cent refund for return of bottle.)
Water, lime, P. C., 5s, bot..... .17
(Five cents refund for return of bottle.)

Eggs for Setting.

For a limited period only purchases of eggs for setting may be made at the Summit poultry farm at the following prices:

White Leghorn or Rhode Island Red, per setting of 15 eggs, $3; two settings, or 30 eggs, $5.50.

All sales f. o. b. Summit.

Sale of Laying Mash.

The Summit Poultry Farm has on hand about 6,000 pounds of laying mash, in excess of the amount required, which is offered for sale at $7.42 per cwt. f. o. b. Summit poultry farm. Orders should be placed on the Superintendent of the Cattle Industry Division, Cristobal.

Schedule of Official Jitney Service.

Following is the schedule of the official jitney plying between Balboa shops and the Ancon police station, carrying employees in the conduct of official business, upon presentation of passes issued by the Chief Quartermaster or of the "special pass" issued by the Governor:

FROM ANCON POLICE STATION TO BALBOA SHOPS.

Police Station	Leave on the hour and half hour.
Administration Building	Leave 7 minutes and 37 minutes after the hour.
Balboa Commissary	Leave 10 minutes and 40 minutes after the hour.
Balboa shops	Arrive 15 minutes and 45 minutes after the hour.

FROM BALBOA SHOPS TO ANCON POLICE STATION.

Balboa shops	Leave 15 minutes and 45 minutes after the hour.
Port Captain's Office	Leave 18 minutes and 45 minutes after the hour.
Balboa Commissary	Leave 20 minutes and 50 minutes after the hour.
Administration Building	Leave 25 minutes and 55 minutes after the hour.
Ancon Police Station	Arrive on the hour and half hour.

COMMISSARY NOTES.

Ice Cream.

During the period April 11 to May 15, inclusive, the ice cream plant will manufacture 11 different flavors of bulk and 12 of brick ice cream. These are orange, chocolate, bisque, strawberry, peach, vanilla, pineapple, lemon, maple walnut, banana, and mango, Neapolitan being available in pint bricks only.

Lime Water.

The Commissary Division has begun the manufacture of Lime Water (Liquor Calcis, U. S. P., 0.14 per cent of pure calcium hydroxide). The price is 17 cents for a one-fifth gallon bottle, with 5 cents allowed for return of container. Information as to the quantity of this product to be used in different milk feedings may be obtained from the infant diet sheets issued by Canal Zone district physicians.

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CANAL WORK IN MARCH.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of March, 1921:

BALBOA HEIGHTS, C. Z., April 15, 1921.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of The Panama Canal for the month of March, 1921.

CANAL TRAFFIC.

The total number of vessels and craft of all kinds through the Canal as compared with the preceding month, and with the corresponding month of last year, was as follows:

	March, 1921.	February, 1921.	March, 1920.
Commercial vessels	255	241	235
United States Government vessels	37	94	9
Launches (under 10 tons)	11	3	2
Total vessels and craft	303	338	246

COMMERCIAL TRAFFIC.

A comparison of this month's traffic with that of the preceding month, of the corresponding month of 1920, and of the average month's traffic for the past 12 months, shows the following:

Panama Canal net tonnage:	
March, 1921	1,112,818
February, 1921	916,838
March, 1920	819,362
Average, past 12 months	934,491
Registered gross tonnage:	
March, 1921	1,417,220
February, 1921	1,179,979
March, 1920	1,055,619
Average, past 12 months	1,193,235
Registered net tonnage:	
March, 1921	917,441
February, 1921	752,022
March, 1920	676,270
Average, past 12 months	760,247
Tolls earned:	
March, 1921	$1,105,536.55
February, 1921	917,412.79
March, 1920	831,304.20
Average, past 12 months	926,018.75
Tons of cargo carried:	
March, 1921	1,184,563
February, 1921	952,904
March, 1920	854,516
Average, past 12 months	990,084

Ocean-going commercial vessels passing through the Canal averaged 8.2 per day. The average tonnage, tolls, and tons of cargo carried, per commercial vessel, as compared with last month's traffic, and with the corresponding month of last year, were as follows:

Average per vessel.	March, 1921.	February, 1921.	March, 1920.
United States equivalent net tonnage	3,624	3,170	2,894
Panama Canal net tonnage	4,364	3,804	3,486
Registered gross tonnage	5,557	4,896	4,492
Registered net tonnage	3,597	3,120	2,878
Tolls	$4,335.44	$3,806.69	$3,537.46
Tons of cargo (all vessels)	4,645	3,954	.....
Tons of cargo (laden vessels only)	4,844	4,495	.....

TOLLS PAID PER CARGO TON BY NATIONALITY OF VESSELS.

The average rate of tolls paid on each ton (2,240 pounds) of cargo passing through the Canal from the Atlantic to the Pacific was $0.97, and from the Pacific to the Atlantic, the rate was $1.05, with a general average of $1.00. The average rate paid per ton of cargo by vessels of various nationalities, is shown in the following tabulation:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Brazilian	$0.65	$0.65	$0.65
British	1.04	.94	1.00
Chilean	2.10	3.07	2.56
Danish	1.27	.62	.76
Dutch	3.54	.61	.90
French	3.16	.75	1.02
Italian	.....	10.19	10.19
Japanese	.94	.95	.94
Norwegian	.62	.77	.71
Peruvian	1.55	.73	.99
Russian	.83	10.05	1.17
Swedish	.70	.65	.68
United States	.92	1.54	1.12
Average rate, all ships	.97	1.05	1.00
Average rate, all ships, last month	.94	.97	.96

In the computation of the rate of tolls paid per ton of cargo through the Canal, as shown in the above table, tolls paid on warships, passenger ships, yachts, and other noncargo-carrying vessels have been eliminated, but tolls paid on cargo-carrying ships passing through the Canal in ballast have been included. The difference in the rate of tolls paid per cargo ton by ships of various nationalities is due to the fact that some ships passed through the Canal in ballast, others but partially loaded, while others were carrying capacity cargoes.

The lowest rate of tolls levied per ton of cargo carried, against a vessel using the Canal during the month, was paid by the Norwegian steamship *Hesperos*, carrying 8,289 tons of nitrate, on which tolls of $3,396.25 were charged, or a fraction under 41 cents per cargo ton.

COMMODITY STATISTICS.

A classification of all cargo, by commodities, giving the amount of each commodity carried through the Canal, and the origin and destination of the same, has been previously compiled, and was published in THE PANAMA CANAL RECORD under date of April 13, 1921. A brief summary of the principal items is given herewith:

CARGO PASSING FROM ATLANTIC TO PACIFIC.

Commodity.	Tons.	Per cent of total cargo.		
			This month	Last month
Oils:				
Crude	158,307	25	35	35
Refined	61,469	10		
Manufactured goods:				
Iron and steel	70,301	11	16	16
Machinery and railroad equipment	19,905	3		
Other	13,146	2		
Coal and coke	87,945	.....	14	19
Sugar	38,710	.....	6	2
Sulphur	12,350	.....	2	3
Cotton, raw	8,343	.....	1	1
Cement	7,056	.....	1	2
Tobacco	3,885	.....	5	3

CARGO PASSING FROM PACIFIC TO ATLANTIC.

Nitrate	141,026	31	40
Wheat	57,764	13	17
Lumber	23,661	5	8
Oils, refined	24,402	5	6
Barley	19,908	4	3
Metals (copper, 13,304 tons; others, 2,911 tons)	16,215	4	2
Flour	11,726	3	3
Sugar	8,979	2	3

UNITED STATES COASTWISE TRAFFIC.

Included in the March traffic were 27 vessels engaged in the United States coastwise trade, combining an aggregate Panama Canal net tonnage of 133,574, and carrying 107,400 tons of cargo. Of these vessels, 16 passed from the Atlantic to the Pacific with a total Panama Canal net tonnage of 71,770, and carrying 55,111 tons of cargo; and 11 passed from the Pacific to the Atlantic, with a total Panama Canal net tonnage of 61,804, and carrying 52,289 tons of cargo. Tolls on the above vessels aggregated $139,809.29.

UNITED STATES SHIPPING BOARD VESSELS.

Twenty-six vessels under the control of the United States Shipping Board passed through the Canal during the month, combining a total Panama Canal net tonnage of 128,889, and cargo of 114,003 tons. The tolls on these vessels aggregated $128,160.80. Of the above vessels, 18 passed from the Atlantic to the Pacific, with a total Panama Canal net tonnage of 94,823, and carrying 83,978 tons of cargo; and 8 passed from the Pacific to the Atlantic, with a total Panama Canal net tonnage of 34,066, and carrying 30,025 tons of cargo.

In addition to the above, 4 vessels under control of the United States Shipping Board, with a combined Panama Canal net tonnage of 19,759, and carrying 30,855 tons of cargo for the United States Navy, passed through the Canal from the Atlantic to the Pacific, free of tolls, during the month.

TRADE ROUTES.

Statements attached to this report show the origin and destination of all cargo passing through the Canal as nearly as the same can be segregated from the data available (*see* pages 554 and 555). Below is given a summary of the traffic passing over the principal trade routes, showing the number of vessels, their Panama Canal net measurement, and the amount of cargo carried. The vessels in ballast represent cargo-carrying ships only; warships, tugs, etc., not being included as "ballast."

Trade routes.	Total vessels.			Vessels in ballast.	
	Number.	Panama Canal net tonnage.	Cargo.	Number.	Panama Canal net tonnage.
Atlantic to Pacific.					
East coast of United States to Far East	20	99,017	114,059	.....	.....
United States coastwise	16	71,770	55,111	.....	.....
East coast of United States to west coast of South America	15	51,760	51,697	1	1,598
Europe to Australasia	14	96,952	72,339	1	5,531
United States to Australasia	9	48,203	60,188	.....	.....
Europe to west coast of South America	9	39,832	28,927	.....	.....
Cristobal to west coast of South America	9	14,504	4,435	.....	.....
Europe to west coast of United States	8	38,020	25,412	.....	.....
East coast of Mexico to west coast of South America	7	36,994	60,800	.....	.....
East coast of Mexico to west coast of United States	5	24,114	43,105	.....	.....
West Indies to Far East	4	15,319	24,710	.....	.....
Cristobal to west coast of United States	3	4,617	1,540	1	809
East coast of United States to Balboa	3	20,657	31,047	.....	.....
East coast of Mexico to west coast of Canada	3	15,365	26,129	.....	.....
Cristobal to west coast of Central America	2	1,610	1,233	.....	.....
Europe to west coast of Canada	2	12,417	5,560	.....	.....
Other trade routes	11	22,440	30,287	2	2,230
Totals	140	613,591	636,579	5	10,168
Totals for February, 1921	114	435,233	474,872	7	10,487
Totals for March, 1920	121	453,038	428,473	33	90,519
Pacific to Atlantic.					
West coast of South America to east coast of United States	17	60,290	71,187	1	2,684
West coast of South America to Europe	16	72,706	85,394	.....	.....
West coast of United States to Europe	12	61,259	94,803	.....	.....
United States coastwise	11	61,804	52,289	2	12,362
West coast of South America to Cristobal	9	12,542	7,809	.....	.....
Australasia to Europe	8	51,926	56,642	.....	.....
West coast of South America to Mexico	7	37,065	.....	7	37,065
Far East of east coast of United States	5	26,706	19,366	1	4,155
West coast of United States to east coast of Mexico	6	31,641	.....	6	31,641
West coast of United States to Cristobal	4	7,076	2,540	.....	.....
Balboa, C. Z., to east coast of United States	3	20,657	.....	3	20,657
Australasia to east coast of United States	2	10,726	7,120	.....	.....
West coast of South America to Azore Islands[1]	2	9,909	15,524	.....	.....
West coast of Canada to east coast of United States	2	9,610	11,050	.....	.....

[1] For orders.

Trade routes.	Total vessels.			Vessels in ballast.	
	Number.	Panama Canal net tonnage.	Cargo.	Number.	Panama Canal net tonnage.
Pacific to Atlantic—Continued.					
West coast of South America to West Indies[1]	2	7,297	11,577	.....	.....
West coast of United States to West Indies	2	1,514	730	.....	.....
West coast of South America to east coast of Canada	2	3,193	5,436	.....	.....
West coast of Central America to Cristobal, C. Z.	2	1,610	740	.....	.....
Other trade routes	3	11,696	5,777	1	5,085
Totals	115	499,227	447,984	21	113,649
Totals for February, 1921	127	481,595	478,032	18	89,703
Totals for March, 1920	112	364,294	366,043	7	26,591

[1] For orders.

LATIN-AMERICAN TRAFFIC.

The number of vessels, tonnage, and tons of cargo carried by vessels engaged in the Latin-American trade, classified by nationality, were as follows:

ATLANTIC TO PACIFIC.

Nationality.	No. of vessels	Tonnage.				Tolls.	Cargo.
		United States equivalent.	Panama Canal net.	Registered gross.	Registered net.		
United States	26	92,154	107,623	139,580	89,940	$113,394.65	153,897
British	24	56,324	69,292	93,326	57,192	69,815.90	61,181
Norwegian	4	15,763	18,330	24,655	15,694	19,703.75	32,649
Danish	2	4,294	4,976	6,313	3,979	5,254.15	6,328
Peruvian	2	3,021	5,910	9,361	5,100	3,776.25	2,433
Brazilian	1	3,511	4,566	5,472	3,523	4,388.75	6,700
Russian	1	3,375	3,940	5,236	3,398	4,218.75	5,037
Dutch	1	2,224	3,807	3,623	2,229	2,780.00	1,646
French	1	3,600	4,146	5,765	3,881	4,500.00	777
Chilean	1	1,463	2,577	2,553	1,600	1,828.75	835
Japanese	4	13,974	15,319	19,793	13,770	17,353.00	24,710
Totals	67	199,703	240,486	315,677	200,306	247,013.95	296,193
February, 1921	67	180,148	217,954	282,755	179,204	221,102.65	252,149
March, 1920	70	.....	220,440	290,629	181,569	.....	117,052

PACIFIC TO ATLANTIC.

United States	29	98,222	114,749	148,769	97,852	$93,879.04	37,352
British	23	59,129	72,509	96,582	59,670	71,240.25	71,281
Norwegian	7	24,263	29,369	36,972	24,770	24,562.87	25,063
Danish	2	6,001	6,861	8,451	5,117	7,501.25	13,700
Japanese	2	6,151	7,511	9,061	6,023	7,688.75	12,700
Dutch	3	9,058	13,020	13,962	9,281	11,322.50	19,667
Italian	2	6,865	8,515	13,225	7,707	8,581.25	842
French	2	8,958	9,564	11,406	7,080	10,989.60	14,567
Peruvian	2	3,021	5,910	9,361	5,100	3,776.25	5,170
Chilean	1	1,463	2,577	2,553	1,600	1,828.75	595
Totals	73	223,131	270,585	350,342	224,200	241,370.51	200,937
February, 1921	80	228,106	275,552	360,913	224,345	256,138.79	243,900
March, 1920	77	.....	218,228	284,235	180,317	.....	282,919

CLASSIFICATION OF COMMERCIAL TRAFFIC.

A statement of this month's traffic, classified according to the nationality of the various ships passing through the Canal, is shown in the following tabulation:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Number and nationality of commercial vessels passing through the Canal:			
British	53	38	91
Chilean	1	1	2
Danish	3	4	7
Dutch	2	4	6
French	2	2	4
Italian	.....	2	2

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Number and nationality of commercial vessels passing through the Canal—Continued:			
Japanese	13	4	17
Norwegian	5	10	15
Peruvian	3	2	5
Russian	1	1	2
Swedish	2	1	3
United States	54	46	100
Brazilian	1	.....	1
Totals	140	115	255
Totals for February, 1921	114	127	241
Totals for March, 1920	123	112	235
United States equivalent net tonnage of commercial vessels passing through the Canal, by nationality:			
Brazilian	3,511	.....	3,511
British	210,575	130,313	340,888
Chilean	1,463	1,463	2,926
Danish	8,767	15,462	24,229
Dutch	9,076	13,921	22,997
French	4,497	8,958	13,455
Italian	.....	6,865	6,865
Japanese	50,251	15,504	65,755
Norwegian	17,080	36,007	53,087
Peruvian	3,070	3,021	6,091
Russian	3,375	1,504	4,879
Swedish	6,236	3,430	9,666
United States	196,567	173,393	369,960
Totals	514,468	409,841	924,309
Totals for February, 1921	362,427	401,498	763,925
Totals for March, 1920	378,991	301,045	680,036
Panama Canal net tonnage of commercial vessels passing through the Canal, by nationality:			
Brazilian	4,566	.....	4,566
British	254,997	159,033	414,030
Chilean	2,577	2,577	5,154
Danish	10,564	17,824	28,388
Dutch	10,768	19,086	29,854
French	5,174	9,564	14,738
Italian	.....	8,515	8,515
Japanese	55,241	18,637	73,878
Norwegian	19,657	44,865	64,522
Peruvian	5,959	5,910	11,869
Russian	3,940	1,819	5,759
Swedish	10,023	5,533	15,556
United States	230,125	205,864	435,989
Totals	613,591	499,227	1,112,818
Totals for February, 1921	435,233	481,605	916,838
Totals for March, 1920	455,058	364,304	819,362
Registered gross tonnage of commercial vessels passing through the Canal, by nationality:			
Brazilian	5,472	.....	5,472
British	324,527	203,617	528,144
Chilean	2,553	2,553	5,106
Danish	13,327	22,006	35,333
Dutch	12,688	21,617	34,305
French	7,274	11,406	18,680
Italian	.....	13,225	13,225
Japanese	72,617	23,849	96,466
Norwegian	26,080	55,523	81,603
Peruvian	9,423	9,361	18,784
Russian	5,236	2,693	7,929
Swedish	10,433	5,554	15,987
United States	295,118	261,068	556,186
Totals	784,748	632,472	1,417,220
Totals for February, 1921	556,798	623,181	1,179,979
Totals for March, 1920	583,485	472,134	1,055,619

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Registered net tonnage of commercial vessels passing through the Canal, by nationality:			
Brazilian	3,523	.....	3,523
British	206,195	128,908	335,103
Chilean	1,600	1,600	3,200
Danish	8,439	14,562	23,001
Dutch	9,100	14,080	23,180
French	4,675	7,080	11,755
Italian	.....	7,707	7,707
Japanese	49,495	15,186	64,681
Norwegian	17,011	37,468	54,479
Peruvian	5,146	5,100	10,246
Russian	3,398	1,511	4,909
Swedish	7,923	4,225	12,148
United States	190,337	173,172	363,509
Totals	506,842	410,599	917,441
Totals for February, 1921	354,964	397,058	752,022
Totals for March, 1920	372,482	303,788	676,270
Tolls levied against commercial vessels passing through the Canal, by nationality:			
Brazilian	$4,388.75	.....	$4,388.75
British	261,827.60	158,276.80	420,104.40
Chilean	1,828.75	1,828.75	3,657.50
Danish	10,845.40	19,327.50	30,172.90
Dutch	11,133.20	17,401.25	28,534.45
French	5,621.25	10,989.60	16,610.85
Italian	.....	8,581.25	8,581.25
Japanese	61,911.45	19,380.00	81,291.45
Norwegian	21,296.15	39,242.87	60,539.02
Peruvian	3,813.00	3,776.25	7,589.25
Russian	4,218.75	1,880.00	6,098.75
Swedish	7,795.00	4,287.50	12,082.50
United States	240,485.80	185,399.68	425,885.48
Totals	635,165.10	470,371.45	1,105,536.55
Totals for February, 1921	449,616.59	467,796.20	917,412.79
Totals for March, 1920	466,148.99	365,155.21	831,304.20
Tons of cargo carried by commercial vessels through the Canal, by nationality:			
Brazilian	6,700	.....	6,700
British	235,386	169,010	404,396
Chilean	835	595	1,430
Danish	8,528	30,966	39,494
Dutch	3,146	28,617	31,763
French	1,777	14,567	16,344
Italian	.....	842	842
Japanese	66,078	20,386	86,464
Norwegian	34,466	50,781	85,247
Peruvian	2,433	5,170	7,603
Russian	5,037	187	5,224
Swedish	11,160	6,640	17,800
United States	261,033	120,223	381,256
Totals	636,579	447,984	1,084,563
Totals for February, 1921	474,872	478,032	952,904
Totals for March, 1920	428,273	466,043	854,516

A further summary of the commercial traffic, classified according to type of vessel, and segregating laden and unladen ships, is given herewith:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Cargo-carrying ships:			
Laden	131	93	224
Ballast	5	21	26
Other vessels:			
Passenger ships	2	.....	2
Yachts	2	1	3
Total commercial	140	115	255

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Panama Canal net tonnage of above:			
Cargo-carrying ships—			
Laden	587,475	385,568	973,043
Ballast	10,168	113,649	123,817
Other vessels—			
Passenger ships	15,858	.....	15,858
Yachts	90	10	100
Total commercial vessels	613,591	499,227	1,112,818
Tolls levied on above:			
Cargo-carrying ships—			
Laden	$608,930.00	$388,055.65	$996,985.65
Ballast	2,209.35	82,308.30	84,517.65
Ballast, excess fuel	7,872.50	.....	7,872.50
Other vessels—			
Passenger ships	16,085.00	.....	16,085.00
Yachts	68.25	7.50	75.75
Total commercial vessels	635,165.10	470,371.45	1,105,536.55
A further classification of above ships:			
Steamships	131	105	236
Motor ships	7	9	16
Sailing vessel	1	.....	1
Barge	1	.....	1
Launch (ocean-going)	.....	1	1
Total vessels	140	115	255
Panama Canal net tonnage of above:			
Steamships	590,106	464,830	1,054,936
Motor vessels	16,834	34,387	51,221
Sailing vessel	1,327	.....	1,327
Barge	5,324	.....	5,324
Launch (ocean-going)	.....	10	10
Total commercial vessels	613,591	499,227	1,112,818
Cargo carried by above vessels ..... tons	636,579	447,984	1,084,963
Tolls levied, cargo ships only	$619,011.85	$470,363.95	1,089,375.80
Average tolls per ton of cargo[1]	.97	1.05	1.00
Average tolls per ton of cargo.[2]	.96	.87	.92

[1] Includes cargo-carrying ships in ballast. [2] Excludes cargo-carrying ships in ballast.

CLASSIFICATION OF NONCOMMERCIAL TRAFFIC.

The following traffic passed through the Canal free of tolls during the month of March, 1921:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
United States Navy vessels:			
Colliers	1	1	2
Submarines	3	2	5
Gunboats	2	1	3
Tugs	4	1	5
Submarine chasers	1	5	6
Navy transport	1	.....	1
Supply ship	.....	1	1
Mine sweeper	1	.....	1
Destroyer	.....	1	1
Launches	2	.....	2
Total, Navy vessels	15	12	27
United States Army vessels:			
Transport	.....	1	1
Launches	4	1	5
Total, Army vessels	4	2	6
United States Shipping Board vessels with supplies for United States Navy	4	.....	4
Total vessels through Canal free of tolls	23	14	37
Tonnage of above vessels:			
United States Navy vessels (displacement tonnage)	32,705	28,792	61,497
United States Army vessels (displacement tonnage)	40	9,419	9,459
Shipping Board vessels with Navy supplies (Panama Canal tonnage)	19,759	.....	19,759

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Cargo carried by above vessels:			
United States Navy vessels	8,305	1,900	10,205
United States Army vessels	.....	239	239
Shipping Board vessels with Navy supplies	30,855	.....	30,855
Total cargo through the Canal free of tolls	39,160	2,139	41,299

STATEMENT OF OPERATIONS.

Details of the businesss transacted at the Atlantic and Pacific terminals of the Panama Canal are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Vessels passing through the Canal:			
Commercial ships	140	115	255
United States Government ships	23	14	37
Launches (under 10 tons)	6	5	11
Total vessels and craft	169	134	305
Tonnage of above ships:			
Commercial (Panama Canal net)	613,591	499,227	1,112,818
Government—			
Displacement	32,745	38,211	70,956
Panama Canal net	19,759	.....	19,759
Launches (Panama Canal net)	29	18	47
Cargo carried by above vessels:			
Commercial ... tons	636,579	447,984	1,084,563
Government ... tons	39,160	2,139	41,299
Total cargo through the Canal ... tons	675,739	450,123	1,125,862
Deck cargo included in above ... tons	625	950	1,575
Vessels entering port but not transiting the Canal:			
Number entering	65	5	70
Number clearing	65	11	76
Registered net tonnage of above:			
Entering	196,328	17,888	213,216
Clearing	215,302	23,652	238,954
Registered gross tonnage of above:			
Entering	319,122	22,585	341,707
Clearing	345,757	31,060	376,817
Vessels transiting the Canal and handling passengers or cargo at ports:			
Entering	40	33	73
Clearing	43	33	76
Registered net tonnage of above:			
Entering	133,207	98,826	232,033
Clearing	142,336	98,826	241,162
Registerd gross tonnage of above:			
Entering	207,558	151,320	358,878
Clearing	223,404	151,320	374,724
All vessels entering and clearing at Canal ports, including those transiting the Canal:			
Number entered	311	262	573
Number cleared	322	275	597
Registered net tonnage of above:			
Entering	1,124,181	948,764	2,072,945
Clearing	1,175,342	976,767	2,152,109
Registered gross tonnage of above:			
Entering	1,745,590	1,456,172	3,201,762
Clearing	1,824,271	1,493,969	3,318,240
Transit cargo arriving ... tons	1,097,970	1,084,048	2,182,018
Transit cargo clearing ... tons	1,130,620	1,086,116	2,216,736
Local cargo arriving ... tons	25,606	50,977	76,583
Local cargo shipped ... tons	2,834	451	3,285
Cargo received for transshipment ... tons	19,453	43	19,496
Cargo transshipped ... tons	21,694	.....	21,694
Cargo handled by Receiving and Forwarding Agency, Panama Railroad:			
Received ... tons	34,605	8,633	43,238
Dispatched ... tons	24,651	7,429	32,080
Rehandled ... tons	1,386	642	2,028
Stevedored ... tons	27,747	935	28,682
Vessels supplied with bunker coal:			
Commercial vessels, other than Panama Railroad vessels	68	20	88
Panama Railroad vessels	4	.....	4
United States Army vessels	4	1	5
Total vessels supplied with coal	76	21	97

	Cristobal.	Balboa.	Total.
Coal supplied to above vessels:			
Commercial, other than Panama Railroad vessels.....tons..	34,074	2,148	36,222
Panama Railroad vessels.....tons..	946	.....	946
United States Army vessels.....tons..	687	22	709
Total coal supplied to vessels.....tons..	35,707	2,170	37,877
Coal issues, miscellaneous:			
Panama Railroad departments.....tons..	337	82	419
Panama Canal departments.....tons..	1,118	234	1,352
United States Army, excepting vessels.....tons..	261	.....	261
Individuals and companies.....tons..	404	.....	404
Total coal furnished from Panama Canal deposits.....tons..	37,827	2,486	40,313
Coal on hand, April 1, 1921.....tons..	186,541	24,568	211,109
Coal on hand, March 1, 1921.....tons..	163,565	5,455	169,020
Coal received during March, 1921.....tons..	60,803	21,599	82,402
Coal, United States Navy account.			
Coal furnished United States Navy, including vessels.....tons..	1,346	1,355	2,701
Coal on hand, April 1, 1921.....tons..	53,326	8,672	61,998
Coal on hand, March 1, 1921.....tons..	54,672	10,027	64,699
Vessels supplied with fuel oil from Panama Canal tanks.....	1	3	4
Fuel oil supplied to above vessels.....bbls..	2,759	3,656	6,415
Fuel oil issues, miscellaneous:			
To Panama Canal departments.....bbls..	9,375	22,374	31,749
To Panama Railroad departments.....bbls..	370	.....	370
To Army and Navy.....bbls..	102	292	394
To individuals and companies.....bbls..	51	.....	51
Leakage, etc.....bbls..	1,089	.....	1,089
Total issues.....bbls..	13,746	26,322	40,068
Fuel oil on hand, April 1, 1921.....bbls..	115,408	66,752	182,160
Fuel oil on hand, March 1, 1921.....bbls..	129,154	93,074	222,228
Diesel oil on hand, April 1, 1921.....bbls..	53,366	1,051	54,417
Fuel oil pumped for individuals and companies at 4 cents per barrel.bbls..	157,250	212,897	370,147
Vessels furnished with commissary supplies:			
Commercial.....	152	94	246
Panama Railroad vessels.....	14	3	17
United States Government vessels.....	17	23	40
Total vessels furnished supplies.....	183	120	303
Commissary sales to commercial vessels:			
Ice.....	$2,300.55	$1,142.52	$3,443.07
Wholesale groceries.....	7,307.39	2,679.95	9,987.34
Cold storage.....	31,832.57	12,089.42	43,921.99
Laundry.....	3,464.71	885.42	4,350.13
Miscellaneous.....	1,422.30	717.69	2,139.99
Totals.....	46,327.52	17,515.00	63,842.52
Commissary sales to Panama Railroad vessels:			
Ice.....	106.20	92.80	199.00
Wholesale groceries.....	415.72	1,000.34	1,416.06
Cold storage.....	2,954.08	2,986.17	5,940.25
Laundry.....	2,027.09	.....	2,027.09
Miscellaneous.....	676.97	155.40	832.37
Total.....	6,180.06	4,234.71	10,414.77
Commissary sales to Government vessels:			
Ice.....	33.84	409.58	443.42
Wholesale groceries.....	670.15	6,562.85	7,233.00
Cold storage.....	4,182.47	15,634.97	19,817.44
Laundry.....	782.97	25.25	808.22
Miscellaneous.....	297.23	1,094.26	1,391.49
Total.....	5,966.66	23,726.91	29,693.57
Total commissary sales to all vessels:			
March, 1921.....	58,474.24	45,476.62	103,950.86
February, 1921.....	65,365.50	136,407.66	201,773.16
March, 1920.....	103,923.01	57,971.23	161,894.24
Admeasurement certificates:			
United States equivalent issued or made.....	31	1	32
Measured for Panama Canal.....	18	9	27
United States equivalent or Panama Canal corrected.....	31	10	41

	Cristobal.	Balboa.	Total.
Services of harbor equipment:			
Tugs, total operating hours	672	460	1,132
Launches, total operating hours	1,981	1,715	3,696
Number of vessels supplied with water	166	106	272
Water supplied to above vessels ... galls.	8,346,490	3,577,250	11,923,740
Number of vessels repaired at Panama Canal shops	68	32	100
Number of vessels dry-docked	6	15	21
Services to American vessels:			
Crew shipped	1	.....	1
Crews paid off	2	.....	2
Shipping article written	1	.....	1
Marine notes of protest noted	15	4	19
Bills of health issued	160	156	316
Clearances issued	167	149	316
Article opened	1	.....	1
Services to American seamen:			
Seamen shipped	163	131	294
Seamen paid off	190	90	280
Seamen deserted	12	4	16
Seamen lodged and subsisted	22	16	38
Seamen repatriated	20	6	26
Wages of American seamen:			
Total amount of wages earned	$4,438.78	$8,378.47	$49,817.25
Deductions approved by Deputy Shipping Commissioner	27,815.39	1,429.20	29,244.59
Balance due seamen	13,623.39	6,949.27	20,572.66
Paid to seamen	11,936.07	5,157.86	17,093.93
Received on deposit for seamen	1,687.32	1,791.41	3,478.73
Movement of passengers.			
Disembarking at Canal Zone ports:			
First class—			
From Atlantic ports	988	133	1,121
From Pacific ports	217	164	381
Total, first class	1,205	297	1,502
Other than first class—			
From Atlantic ports	1,660	22	1,682
From Pacific ports	78	182	260
Total, other than first class	1,738	204	1,942
Total disembarking at Canal Zone ports	2,943	501	3,444
Embarking from Canal Zone ports:			
First class—			
For Atlantic ports	1,557	7	1,564
For Pacific ports	232	103	335
Total, first class	1,789	110	1,899
Other than first class—			
For Atlantic ports	1,026	.....	1,026
For Pacific ports	46	58	104
Total, other than first class	1,072	58	1,130
Total embarking from Canal Zone ports	2,861	168	3,029
Remaining on board vessels:			
First class—			
Bound from Atlantic to Pacific ports	866	1,010	1,876
Bound from Pacific to Atlantic ports	623	1,069	1,692
Bound from Atlantic to Atlantic ports	1,015	.....	1,015
Bound from Pacific to Pacific ports	.....	15	15
Total, first class	2,504	2,094	4,598
Other than first class—			
Bound from Atlantic to Pacific ports	2,079	2,046	4,125
Bound from Pacific to Atlantic ports	890	1,051	1,941
Bound from Atlantic to Atlantic ports	111	.....	111
Bound from Pacific to Pacific ports	.....	397	397
Total, other than first class	3,080	3,494	6,574
Total remaining on board	5,584	5,588	11,172
Total passengers arriving	8,527	6,089	14,616
Total passengers departing	8,445	5,756	14,201
Arrivals in excess of departures	82	333	415

LOCK OPERATION.

The following tabulations give the number of lockages, vessels through the locks, and the consumption of water for lockages, for the month of March, 1921:

NUMBER OF LOCKAGES.

	Commercial.			Noncommercial.			Grand total.
	North.	South.	Total.	North.	South.	Total.	
Gatun	109	129	238	12	17	29	267
Pedro Miguel	112	145	257	17	22	39	296
Miraflores	111	144	255	16	11	27	282
Total lockages, March, 1921	332	418	750	45	50	95	845
Total lockages, February, 1921	362	338	700	.....	.....	191	891
Total lockages, March, 1920	281	321	602	.....	.....	73	675

NUMBER OF VESSELS PUT THROUGH LOCKS.

	Commercial.			Noncommercial.			Grand total.
	North.	South.	Total.	North.	South.	Total.	
Gatun	118	149	267	25	29	54	321
Pedro Miguel	118	150	268	50	49	99	367
Miraflores	118	150	268	34	33	67	335
Total vessels, March, 1921	354	449	803	109	111	220	1,023
Total vessels, February, 1921	385	362	747	.....	.....	451	1,198
Total vessels, March, 1920	336	381	717	.....	.....	194	911

Noncommercial vessels through the locks were classified as follows:

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels	43	36	35
Canal equipment	11	63	32
Total, noncommercial vessels	54	99	67

The consumption of water for lockages, loss in leakage, and for maintenance, is shown in the following tabulation:

	Gatun.	Pedro Miguel.	Miraflores.
	Cubic feet.	*Cubic feet.*	*Cubic feet.*
Lockages	965,900,000	882,630,000	841,770,000
Leakage	25,000,000	12,200,000	55,000,000
Maintenance	.....	24,620,000	11,680,000
Total consumption, March, 1921	990,900,000	919,450,000	908,450,000
Total consumption, February, 1921	1,030,310,000	994,570,000	965,240,000
Total consumption, March, 1920	856,130,000	841,560,000	741,590,000

METEOROLOGY AND HYDROGRAPHY.

The rainfall for the month was generally below normal everywhere except over the Pacific section, the heavy rain on the 13th on the Pacific side causing considerable excess in the monthly totals at Balboa, Balboa Heights, and Miraflores. Totals in the Canal Zone and vicinity ranged from 0.03 inch at Juan Mina to 3.29 inches at Balboa. The greatest amount of rainfall recorded on any one day was 2.24 inches at Balboa on March 13.

The estimated rainfall over the Gatun Lake watershed was 0.69 inch, as compared with a 11-year mean of 0.80 inch; over the Chagres River watershed above Alhajuela, it was 1.07 inches, as compared with a 20-year mean of 1.08 inches.

The discharge of the Chagres River at Alhajuela was 550 c. f. s., being 25 per cent below the 20-year March mean of 730 c. f. s., and furnished 61 per cent of the Gatun Lake total yield. The maximum momentary discharge was 1,940 c. f. s. at elevation 92.14 feet on the 26th, and the minimum flow was 320 c. f. s. on the 15th and 16th.

The Gatun Lake watershed total yield was 897 c. f. s., being 21 per cent below the 11-year March mean of 1,137 c. f. s. The maximum total yield recorded for the month of March was 1,792 c. f. s. in 1915, while the minimum total yield was 594 c. f. s. in 1920. The net yield for the month was 121 c. f. s. The lake varied in ele-

vation from 85.31 feet on the 18th, to 83.76 feet on the 31st. A decrease in storage of 6,900,000,000 cubic feet occurred during the month, which is the maximum storage depletion for any one month since the existence of Gatun Lake.

The draft on the lake for lockages and power was 2,394 c. f. s., compared with 2,502 c. f. s. for last month, and 1,366 c. f. s. for March, 1920. The ratio of water used for power and lockages was 2.46 to 1. The consumption of 1,702 c. f. s. at the hydroelectric station, during the month, has been exceeded but once, 1,703 c. f. s. being used in September, 1920.

Miraflores Lake varied from a maximum elevation of 54 feet on the 6th, to a minimum of 52.50 feet on the 28th, averaged 53.46 feet and ended at 53.26 feet midnight the 31st.

Seismic disturbances were recorded on the 12th, 21st, and 28th. The disturbance of the 12th was generally felt by residents of Balboa and Panama, the N-S component recorded a maximum amplitude of 58 (plus) millimeters, the approximate distance of the epicenter being about 345 miles.

ELECTRICAL DIVISION.

The combined gross output of the Gatun hydroelectric station for the month of March, was 6,328,600 KWH, on a computed water consumption of 4,559,456,500 cubic feet. The combined gross output of the Miraflores steam plant was 12,010 KWH, with an oil consumption of 2,162 barrels.

The total gross output of both stations was 6,340,610 KWH, and the total power distributed to consumers was 5,323,254 KWH. The total loss of power in plant auxiliaries, transmission and transformation was 1,017,356 KWH, or 16.04 per cent of the gross output.

Miscellaneous repairs and installations of electrical equipment were made on 26 vessels at Cristobal and 32 at Balboa during the month. There were 414 work orders issued for work to be performed by the Electrical Division during the month as compared with 303 for February.

The following work was under progress during the month, with completion on March 31, as shown:

	Per cent completed.
Installation of 4 K-5 switches at Miraflores substation	100
Installation of two 1,000-ampere, K-12 switches at Cristobal substation	95
Installation of new 8,400 KVA transformer and new tie-line equipment in Gatun substation	[1] 63
Installation of 2 complete feeder equipments at the Balboa substation	[1] 95
Extension of underground distribution in New Cristobal	99

[1] Indicates that no work was done during the month.

SHOP, FOUNDRY, AND DRY DOCK WORK.

The decline in repair work at the Mechanical Division shops showed no abatement during the month. Further heavy reductions in the gold hourly force were made at the end of the month, to become effective a few days later. With these latter reductions in effect, both gold and silver rolls have been reduced approximately one-third since January 1, 1921.

Miscellaneous repairs were made at the Balboa shops on 32 vessels during the month, the more important of which were as follows:

The steamship *Steel Inventor* was placed in dry dock for the rebuilding of her bow which was damaged at the time she struck and sunk the United States torpedo boat destroyer *Woolsey*. The repairs, involving a new stem and the rebuilding of a large amount of bow plating and framing, were carried on night and day and completed during the month.

The steamship *Cristobal* was dry-docked for cleaning and painting. This vessel was last previously docked 15 months ago, when her bottom was painted with the Navy type of bottom paint, manufactured by The Panama Canal, and used locally in all cases, unless the ship's owner supplied a different brand of paint. After 15 months' service it was found that the paint on the *Cristobal* was in very good condition, except along the water-line belt, which is in marked contrast to many of the proprietary paints, some of which last but a few months. Experience has shown that the Navy standard formula is at least equal to the best brands of proprietary paint and is superior to most of them.

Repairs to the torpedo boat destroyer *Mason* were completed, as well as hull repairs to the *Satterlee*, the latter vessel remaining at the plant awaiting the arrival of a new steering engine from the United States.

The following vessels were dry-docked at Balboa during the month: Steamships *Steel Inventor* and *Cristobal;* submarines *O–11*, *O–12*, *O–13*, *O–15*, and *O–16;* destroyers *Mason* and *Satterlee;* barges *Nos. 137*, *138*, and *201;* tug *Sciota;* tender *Perico;* and Panama Railroad pile driver *No. 198*.

At the Cristobal shops miscellaneous repair work was performed on 68 vessels, the more important of which was as follows:

The keel of the schooner *Anthony Nichols* was repaired, the bottom scraped, and miscellaneous minor repairs made. The seams on both boilers of the tug *Favorite* were calked and the circulating engine column welded. Ballast was installed in the U. S. S. Eagle *No. 31*, and the hull cleaned and painted. The beams under the boilers, and the auxiliary steam pump of the steamship *Jamaica* were repaired. A new anchor shaft was made for the U. S. S. submarine *O–14* and battery and hull ventilation ducts were renewed. The valve seats on the circulating pump of the steamship *Balboa* were refastened and a 2-inch sanitary line on the port side was renewed. The reduction valve to the steering engine of the U. S. S. Eagle *No. 36* was repaired, together with the turbine fuel oil pump in the fire room and the indicator on steering gear in pilot house.

The following vessels were dry-docked at Cristobal during the month: Steamship *Acajutla;* schooner *Anthony Nichols;* tug *Tavernilla;* U. S. S. Eagle *No. 31;* submarine *O–14* and S. P. *No. 2235*.

The output of the Mechanical Division in patterns, castings, and foundry production for March, as compared with that for the preceding month, was as follows:

	March, 1921.			February, 1921.		
	Patterns.	Castings.	Pounds.	Patterns.	Castings.	Pounds.
Iron	26	595	47,676	32	859	38,909
Steel	17	508	101,882	6	425	87,527
Brass	24	1,113	16,400	12	1,851	31,940

The routine inspection, hostling, and repair equipment for the Panama Railroad Company was carried on during the month. Eight hundred and twenty-five job orders were completed during the month, with 456 remaining uncompleted on March 31.

BUILDING DIVISION.

The following statement represents the degree of completion on March 31 of the more important work under construction by the Building Division:

	Per cent completed.
Silver townsite, Mount Hope:	
Thirty-nine 12-family married quarters	100
Ten 32-room bachelor quarters	99
Royal Mail Steam Packet Company's office, Cristobal	90
Applying specification roofing to Pier No. 6, Cristobal	100
Reroofing Cristobal bakery	[1] 95
Repairs to 35 houses, Cristobal	75
Four hundred and sixty-eight kitchenettes, for silver townsite, Cristobal	[1] 50
Roof between buildings 2 and 3, Balboa	95
Roof between buildings 3 and 4, Balboa	95
Moving 2 type-18 houses from Las Cascadas to Cristobal	85
All-America Cables Company building, Cristobal	68
Manufacture of 300 wooden rocking chairs	25
Erection of boiler, cold storage plant, Cristobal	15
Repairs to Paraiso clubhouse	100
Repair and paint Balboa clubhouse	100
Construction of asbestos roof, Balboa ice plant	100
Two transformer houses, New Cristobal	100
Rebuilding ovens at Cristobal bakery	80
Construction of building for Salvation Army, Colon	40

[1] Indicates that no work was performed during the month.

Construction work for the Army and Navy is separately reported.

DREDGING DIVISION.

With the exception of the last 2 days of the month, Cucaracha Slide has shown no movement. The dredge *Gamboa*, on a 2-shift basis, worked in the basin in front of this slide, dredging to a depth of 30 to 35 feet, and removing 121,100 cubic yards of material during the month. This makes a total of 2,487,500 cubic yards of material removed since the slide of February, 1920. There was no interference with traffic through the Canal during the month. Neither Culebra nor Barge Repair Slides showed any movement during March.

The total excavation for March, including earth, rock, run-of-bank gravel, and sand, was 657,908 cubic yards, as follows:

Cubic yards.	Classified as— Earth.	Rock.	Character of work.	Stations.	Equipment
				Atlantic entrance.	
124,000	124,000	.....	Maintenance.....	236–50 to 212–80 E.....	*No. 86.*
				Gaillard Cut (Cucaracha).	
121,100	24,200	96,900	Maintenance.....	1805–00 to 1814–00 E.....	*Gamboa.*
				Miraflores Lake.	
147,800	133,100	14,700	Maintenance.....	1954–60 to 1967–00 E.....	*No. 83.*
				1987–00 to 2080–00 E.	
				Pacific entrance.	
500	.....	500	Construction.....	2198–70 to 2200–50.....	*Cascadas.*
500	500	.....	Maintenance.....	2198–70 to 2200–50.....	*Cascadas.*
				Atlantic terminals.	
136,500	136,500	.....	Aux. construction..	Inner harbor, Cristobal.....	*No. 86.*
				Balboa inner harbor.	
36,300	36,300	.....	Maintenance.....	Docks 14, 15, 18, and D. L.....	*Cascadas.*
37,900	37,400	500	Construction.....	Docks 14, 15, 18, and D. L.....	*Cascadas.*
				Chagres River gravel service.	
5,700	5,700	.....	Aux. construction..	Uncovering beds.....	*Marmot.*
47,608	47,608	.....	Aux. construction..	Sand and gravel excavation.....	*Marmot.*
657,908	545,308	112,600			

The material excavated at the various stations was disposed of as follows:

	Cubic yards.
Telfer's Island, east of Canal, Atlantic entrance	124,000
North of Gamboa	120,200
East side of Canal prism, Miraflores Lake	147,800
Fill, west of coaling station, Cristobal	136,500
Sea dumps, Pacific entrance	74,200
Towed to Gamboa	47,608
Deep water, Chagres River	5,700
Dumped at sea, Pacific entrance	1,000
North of Gold Hill	900
Total	657,908

On April 1, 1921, the following excavation remained to be done:

Location.	Earth.	Rock.	Total.
	Cu. yds.	*Cu. yds.*	*Cu. yds.*
Gaillard Cut	.....	25,000	25,000
Pacific entrance	45,000	75,400	120,400
Total, Canal prism	45,000	100,400	145,400
Balboa inner harbor	24,850	6,000	30,850
Total, ocean to ocean	69,850	106,400	176,250

MUNICIPAL ENGINEERING DIVISION.

The total output of all pumping stations, and of the 3 filtration plants as compared with the preceding month, and of the corresponding month of last year, were as follows:

	March, 1921.	February, 1921.	March, 1920.
	Gallons.	*Gallons.*	*Gallons.*
Pumping stations	834,072,750	794,342,250	883,393;100
Filtration plants	511,274,000	484,624,000	532,335,000

Sales of water to vessels at the Cristobal and Balboa docks totaled 11,923,740 gallons. The consumption of water in Panama City was 102,527,000 gallons, and the amount consumed in Colon was 58,570,500 gallons.

Construction work, as itemized below, was under progress during the month, with completion on March 31, as shown:

Northern District.

	Per cent completed.
Municipal work, New Cristobal townsite:	
Grading	[1] 55
Roads	[1] 97.5
Water lines	[1] 72
Sidewalks	[1] 86
Installation of 12-inch oil line to dock 14, Cristobal	100
Installation of two 12-inch oil lines to pier 6, Cristobal	30
Installation of 6-inch Diesel oil line to dock 6	[2] 40
Widening of road, Mount Hope pumping station	100
Relaying of 10-inch water line to coaling plant	100

[1] Indicates that no work was performed during the month.
[2] Work discontinued owing to lack of funds.

Southern District.

	Per cent completed.
Storm sewer, Javillo Fill	100
Box sewer, Panama Railroad yards	100
Concrete streets, new Santo Tomas Hospital	[1] 98
Reconstruction of road, Quarry Heights	[1] 95
Water and sewer connections to Shrine building, Balboa Heights	100
Box sewer, 13th Street, Panama City	100
New wash water tank, Miraflores	[1] 95
Construction of new concrete sea wall, Santo Tomas hospital	15
Construction of sewer and water mains, Southern Avenue, Panama	[1] 50
Construction of concrete trestle under oil line, Balboa	90

[1] Indicates that no work was performed during the month.

OCCUPANTS OF QUARTERS.

Occupants of Panama Canal and Panama Railroad quarters on March 31, were classified as follows:

	Men.	Women.	Children.	Totals.		
				March, 1921.	February, 1921.	March, 1920.
Americans	3,317	2,267	2,706	8,290	8,511	8,541
Europeans	157	35	53	245	281	312
West Indians	4,978	2,279	4,409	11,666	11,695	9,349
Totals, March, 1921	8,452	4,581	7,168	20,201	.....	.....
Totals, February, 1921	8,593	4,565	7,329	.....	20,487	.....
Totals, March, 1920	8,767	3,817	5,618	.....	.....	18,202

WORKING FORCE.

(Effective March 16, 1921.)

Department or Division.	Employees.		Total employees.		
	Gold.	Silver.	March, 1921.	February, 1921.	March, 1920.
Operation and Maintenance:					
Office	29	44	73	77	77
Building Division	121	393	514	532	1,803
Electrical Division	200	278	478	462	662
Municipal Engineering	97	789	886	949	1,742
Lock Operation	194	699	893	1,052	752
Dredging	185	1,086	1,271	1,250	1,197
Mechanical	878	1,375	2,253	2,583	2,888
Marine	203	577	780	827	600
Fortifications	71	247	318	361	298
Totals	1,978	5,488	7,466	8,093	10,019
Supply Department:					
Quartermaster	210	1,490	1,700	1,732	2,127
Subsistence	29	415	444	470	478
Commissary	285	1,467	1,752	1,766	1,916
Cattle Industry—Plantations	20	408	428	440	870
Hotel Washington	10	101	111	109	109
Totals	554	3,881	4,435	4,517	5,500
Accounting	243	9	252	243	259
Health	253	918	1,171	1,138	1,159
Executive	574	254	828	827	799
Totals	1,070	1,181	2,251	2,208	2,217
Panama Railroad:					
Superintendent	67	491	558	585	630
Transportation	107	147	254	260	323
Receiving and Forwarding Agency	83	615	698	1,088	2,311
Coaling stations	132	888	1,020	1,360	1,235
Totals	389	2,141	2,530	3,293	4,499
Grand totals	3,991	12,691	16,682	18,111	22,235
Grand totals, February, 1921	4,043	14,068	18,111	.....	.....
Grand totals, March, 1920	4,575	17,660	22,235	.....	.....

VITAL STATISTICS.

During the month of March a total of 154 deaths occurred among the population of the Canal Zone and the cities of Panama and Colon, giving an annual death rate of 15.69 per thousand population. Of the total deaths, 6 were due to external causes.

Sixty-two deaths, or 40 per cent of the total deaths, occurred among children under 5 years of age. The leading causes of mortality were tuberculosis, diarrhea and enteritis, and acute and chronic nephritis. These 3 diseases caused 37 per cent of the total deaths.

There were 16 deaths of nonresidents of the Isthmus, which are not included in the above statistics. Three hundred and twenty-four births, 15 of which were stillbirths, were reported during the month, giving an annual birth rate of 33 per thousand population. Deaths among children under 1 year of age numbered 43, giving an infant mortality rate, based on the number of births reported for the month, of 139.4 per thousand.

Two hundred and thirty-six cases of malaria were reported during the month, 208 of which were among nonresidents or residents of the Canal Zone who contracted the disease outside the Canal Zone. There were 3 cases of typhoid fever, all nonresidents and 4 cases of dysentery, of which 3 were nonresidents and 1 from Panama.

Twenty-one cases of smallpox were reported as compared with 66 cases last month. Of these cases 5 were from Panama, and 16 from Colon.

RECEIPTS AND SALES OF MATERIALS AND SUPPLIES.

The total value of the material ordered on United States requisitions and received on the Isthmus during the month of March was $733,374.36, as compared with $949,104.95 for the preceding month, and $546,820.66 for the corresponding month of last year. Of the material received during the month, $708,839.37 was chargeable to Operation and Maintenance, $9,257.33 to Construction and Equipment, and $15,277.66 to miscellaneous departments.

The total cash sales on the Isthmus during the month amounted to $41,301.89, of which $36,911.32 was for stock, $2,032.80 for fuel oil, $1,342.90 for scrap, and $1,014.87 for obsolete and second-hand material.

Sales to steamships from storehouses amounted to $19,792.05, of which $2,032.80 was for fuel oil, and $17,759.25 for miscellaneous stock items.

Total sales of commissary supplies to all purchasers amounted to $892,956.03, made up as follows: To steamships, other than those of the United States Government and of the Panama Railroad Steamship Line, $65,856.83; to The Panama Canal, $138,042.24; to the United States Government, including the Army and Navy, $133,333.68; to individuals and companies, mainly through charge accounts at the retail commissaries, $25,281.84; to the Panama Railroad, including its steamships and the Hotel Washington, $25,532.93, and to individuals purchasing coupons, $504,908.51.

Respectfully,

JAY J. MORROW,

Governor.

Canal Ships Handling "Rush" and Perishable Shipments.

Most of the discussions of the savings of distance, and hence of time, by the use of the Panama Canal have been predicated on comparisons of the distances via the Canal and via alternative water routes. Coordinately, it has been considered that the advantages of the Canal route would apply almost entirely to large shipments of nonperishable cargo, in which cheapness of carriage of a great bulk was the principal factor and speed in delivery a secondary consideration. Between the coasts of the United States, for example, the Canal and the railroads were considered as having separate functions. Coal, lumber, oil, ores, heavy machinery, structural iron and steel, grains and cotton were considered to be the ideal cargoes for the Canal; while perishable goods and shipments of small lots, it was assumed, would be handled by the railways.

In general this has been the case; but there has been a generally unexpected development of the speed element in the traffic through the Canal, primarily in the United States coastwise trade. Two large

coastwise steamship lines, especially, have set out to develop "express service" between the principal Atlantic and Pacific ports of the United States. By regular services with fast ships they have endeavored to meet or excel the railway deliveries on even relatively small shipments in point of time, while being able to set rates about 25 per cent below the railroad rates between the seaboards. The extent of their success in detail can not be determined from here; but it is significant that the Seattle Chamber of Commerce reports that the coastwise lines have started an educational campaign to inform the public of the advantages of the water route, and that the railroads are reported bestirring themselves to establish an assured 20-day schedule for freight shipment between the Atlantic and Pacific coasts.

Another development along these lines has been the shipment of perishable fresh fruits through the Canal from the western coast of the United States in vessels equipped with refrigerated space. From the opening of the Canal it has been used for large shipments of fresh beef and mutton and frozen rabbits from Australia and New Zealand; but until the past half year the refrigerated shipments of fresh fruits from California, Oregon, and Washington, and British Columbia, were sent over the railroads. Then a line of steamships, operated by the Holland-American Line and the Royal Mail Steam Packet Company, jointly, offered refrigerated space for the shipment of apples to Europe. The space was taken quickly and deliveries were made satisfactorily. Subsequently shipments of oranges and lemons from California were made to Atlantic ports of the United States; and in March there passed through the Canal what was reported to be the "first shipment of citrus fruit from Los Angeles to London by water." It consisted of 10 carloads of oranges and 100 boxes of fancy lemons, valued at approximately $25,000. It is claimed that the freight saving amounts to 75 cents per box; that 3 days' time is saved by the all-water route in comparison with shipment by rail to New York and thence by steamer; and that the handling of the fruit is reduced to a minimum.

Fruit growers of the Pacific States are said to be urging the coastwise steamship lines to make more refrigerated ships available for handling the fruit crop to the Atlantic Coast. The coastwise traffic through the Canal has expanded greatly in the past year; and with the development of "express" and refrigerator service may be expected to be an increasingly useful element in the transportation of the United States, with its influence penetrating further inland each year.

Commodities in March.

Cargo passing through the Canal in the month of March, 1921, is classified by commodities, with the areas of origin and destination of the shipments, in the tables on pages 556 to 559, inclusive. The figures represent tons of 2,240 pounds. The data are as close to accuracy as has been possible with the use of the cargo declarations; but in addition to the figures shown, small shipments of the commodities included in the tables and of other commodities not listed separately passed through under the designation of "general cargo."

The tables show the total of each commodity; next, under the heading "From," the origin of the shipments making up that total; and under the heading "To," show the distribution of the total among the several areas of destination.

Distribution of cargo passing through the Canal from the Pacific to the Atlantic, March, 1921.[1]

From—	North America.								Europe.														
	United States.																						
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States	East coast of Canada.	West Indies.	Atlantic terminus Panama Canal.	Total, North America.	Belgium.	British Isles.	Denmark.	France.	Germany.	Holland.	Italy.	Spain.	Europe.[2]	Total, Europe.	Azores.[3]	West Indies.[3]	Grand total.	Per cent of total cargo.
Chile	23,856	26,700	8,250	58,806	.....	.....	652	59,458	15,179	34,766	....	7,067	881	14,409	700	80	7,500	80,582	15,524	11,577	167,141	37.3
Colombia	460	.....	.....	460	...	.....	1,183	1,643	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,643	0.4
Ecuador	1,707	.....	.....	1,707	.....	.....	1,145	2,852	.....	.....	....	.....	.....	.....	62	.....	.....	62	.....	.....	2,914	0.6
Peru	2,214	.....	500	2,714	5,436	.....	4,736	12,886	6,961	1,788	....	.....	.....	.....	.....	1,310	.....	10,059	.....	.....	22,945	5.1
[2] West coast of South America	.....	.....	.....	.....	.....	.....	93	93	2,191	.....	....	.....	.....	.....	.....	.....	.....	2,191	.....	.....	2,284	0.5
Total, South America	28,237	26,700	8,750	63,687	5,436	.....	7,809	76,932	24,331	36,554	....	7,067	881	14,409	762	1,390	7,500	92,894	15,524	11,577	196,927	43.9
West coast of United States	54,449	198	676	55,323	.....	54	1,210	56,587	.....	37,731	330	.....	30,579	10,353	.....	.....	9,120	88,113	.....	.....	144,700	32.3
West coast of Canada	8,500	.....	.....	8,500	.....	.....	.....	8,500	.....	5,599	....	.....	5,191	.....	.....	.....	.....	10,790	.....	.....	19,290	4.3
West coast of Central America	.....	.....	.....	.....	.....	.....	2,070	2,070	.....	.....	580	.....	.....	910	.....	.....	192	1,682	.....	.....	3,752	0.8
Total, North America	62,949	198	676	63,823	.....	54	3,280	67,157	.....	43,330	910	.....	35,770	11,263	.....	.....	9,312	100,585	.....	.....	167,742	37.4
China	1,577	867	.....	2,444	.....	812	.....	3,256	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,256	0.7
Japan	3,596	.....	.....	3,596	.....	.....	.....	3,596	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,596	0.8
Philippines	9,730	.....	.....	9,730	.....	.....	.....	9,730	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,730	2.2
Malay Peninsula	228	.....	.....	228	.....	.....	.....	228	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	228	.....
East Indies	.....	.....	.....	.....	.....	187	.....	187	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	187	.....
[2] Far East	2,556	.....	.....	2,556	.....	.....	.....	2,556	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,556	0.6
Total, Asia	17,687	867	.....	18,554	.....	999	.....	19,553	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	19,553	4.3
Australia	5,120	.....	.....	5,120	.....	.....	.....	5,120	.....	15,086	....	.....	.....	.....	.....	.....	.....	15,086	.....	.....	20,206	4.5
New Zealand	2,000	.....	.....	2,000	.....	.....	.....	2,000	.....	39,466	....	.....	.....	.....	.....	.....	.....	39,466	.....	.....	41,466	9.2
[2] Australasia	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,090	....	.....	.....	.....	.....	.....	.....	2,090	.....	.....	2,090	0.5
Total, Australasia	7,120	.....	.....	7,120	.....	.....	.....	7,120	.....	56,642	....	.....	.....	.....	.....	.....	.....	56,642	.....	.....	63,762	14.2
Grand totals	115,993	27,765	9,426	153,184	5,436	1,053	11,089	170,762	24,331	136,526	910	7,067	36,651	25,672	762	1,390	16,812	250,121	15,524	11,577	447,984	100.0
Per cent of total cargo	25.9	6.2	2.1	34.2	1.2	0.2	2.5	38.1	5.4	30.4	0.2	1.6	8.2	5.7	0.2	0.3	3.7	55.8	3.5	2.6	100.0	.....
Per cent of total cargo last month	24.7	6.1	2.1	32.9	0.6	1.0	0.9	35.8	2.1	27.1	0.7	1.2	5.2	1.4	....	2.0	9.3	49.6	8.0	4.9	100.0	.....

[1] By tons of 2,240 pounds.

[2] General cargo not routed so as to allow segregation among various ports.

[3] For orders.

Distribution of cargo passing through the Canal from the Atlantic to the Pacific, March, 1921.[1]

From—	South America.						North America.						Asia.					Australasia.					
	Chile.	Colombia.	Ecuador.	Peru.	West coast, South America.[2]	Total, South America.	West coast, United States.	West coast, Canada.	West coast, Central America.	Pacific terminus, Panama Canal.	West coast, North America.	Total, North America.	China.	Japan.	Philippine Islands.	Far East.[2]	Total, Asia.	Australia.	New Zealand.	Australasia.[2]	Total, Australasia.	Grand total.	Per cent of total cargo.
North Atlantic ports	5,462	396	492	4,146	16,482	26,978	39,332	21	577	.....	.....	39,930	23,986	27,404	7,532	39,404	98,326	7,375	11,844	20,093	39,312	204,546	32.1
South Atlantic ports	22,334	....	2,104	29	162	24,929	11,525	.....	.....	21,599	.....	33,124	458	899	.....	.....	1,357	.....	.....	7,036	7,036	66,446	10.4
Gulf ports	.....	....	.....	.....	.....	.....	45,112	26,129	.....	9,448	.....	80,689	7,202	5,434	.....	3,320	15,956	13,600	.....	.....	13,600	110,245	17.3
Total, United States	27,796	396	2,896	4,175	16,644	51,907	95,969	26,150	577	31,047	.....	153,743	31,646	33,737	7,532	42,724	113,639	20,975	11,844	27,129	59,948	381,237	59.3
West Indies	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,750	18,960	.....	.....	25,710	9,000	.....	.....	9,000	34,710	5.4
East coast of Mexico	60,800	....	.....	.....	.....	60,800	.....	.....	.....	9,600	.....	9,600	.....	6,315	.....	.....	6,315	.....	.....	.....	.....	76,715	12.1
Atlantic terminus	835	304	771	1,872	466	4,248	720	.....	2,053	.....	.....	2,773	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,021	1.2
Canada	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,800	2,800	2,800	0.4
Total, North America	89,431	700	3,667	6,047	17,110	116,955	96,689	26,150	2,630	40,647	.....	166,116	37,396	60,012	7,532	42,724	147,664	29,975	11,844	29,929	71,748	502,483	78.9
Belgium	1,590	....	.....	.....	1,223	2,813	6,483	.....	.....	.....	.....	6,483	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,296	1.4
British Isles	2,804	....	.....	.....	2,747	5,551	990	621	.....	.....	9,554	11,165	.....	.....	.....	.....	.....	6,685	60,804	4,850	72,339	89,056	14.0
Denmark	1,910	....	.....	.....	.....	1,910	60	.....	.....	.....	.....	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,970	0.3
Germany	8,212	....	350	.....	.....	8,562	1,218	.....	.....	.....	.....	1,218	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,780	1.6
Holland	.....	....	.....	.....	.....	.....	5,004	1,500	.....	.....	.....	6,504	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,504	1.0
Italy	.....	....	.....	.....	30	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30	.....
Norway	.....	....	.....	.....	.....	.....	1,817	.....	.....	.....	.....	1,817	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,817	0.3
France	777	....	.....	.....	48	825	1,000	.....	.....	.....	.....	1,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,825	0.3
Sweden	.....	....	.....	3,502	.....	3,502	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,502	0.6
Europe	.....	....	.....	.....	9,106	9,106	1,040	.....	.....	.....	.....	1,040	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,146	1.6
Total, Europe	15,293	....	350	3,502	13,154	32,299	17,612	2,121	.....	.....	9,554	29,287	.....	.....	.....	.....	.....	6,685	60,804	4,850	72,339	133,925	21.1
East coast of South America	.....	125	.....	.....	.....	125	46	.....	.....	.....	.....	46	.....	.....	.....	.....	.....	.....	.....	.....	.....	171	.....
Grand totals	104,724	825	4,017	9,549	30,264	149,379	114,347	28,271	2,630	40,647	9,554	195,449	37,396	60,012	7,532	42,724	147,664	36,660	72,648	34,779	144,087	636,579	100.0
Per cent of total cargo	16.4	0.1	0.6	1.5	4.8	23.4	18.0	4.4	0.4	6.3	1.5	30.6	5.9	9.4	1.3	6.7	23.3	5.8	11.4	5.5	22.7	100.0	.....
Per cent of total cargo last month	27.7	0.1	0.2	1.3	1.3	37.3	22.4	2.1	1.4	1.9	.....	29.7	7.5	3.2	0.1	7.1	18.0	7.2	6.1	1.7	15.0	.....	.....

[1] Tons of 2,240 pounds.

[2] General cargo not routed so as to allow segregation among various ports.

ATLANTIC TO PACIFIC.

(Figures represent tons of 2,240 pounds.)

Commodity.	Total.	From— East coast of United States.	British Isles.	Other Europe.	Cristobal, C. Z.	East coast of Mexico.	West Indies.	East coast of South America.	East coast of Canada.	To— West coast of South America.	West coast of United States.	Australasia.	Far East.	West coast of Canada.	West coast of Central America.	Balboa, C. Z.
Agricultural implements	1,190	911	279							317	43	750	51	29		
Ammunition	350	350									350					
Asphalt	1	1											1			
Automobiles	916	793	104	15	2				2	115	305	204	292			
Beans, cacao	190		190								190					
Bricks, fire	758		70	688						758						
Butter	1				1					1						
Canned goods:																
Fish	251	205	12	34						84	155	12				
Meat	74	50	20	4						24	50					
Milk	149	149											149			
Vegetables	268	250		14	4					18	250					
Caustic soda	81		79		2					81						
Cement	7,056	3,243	1,663	2,150						5,366		1,663	27			
Cereals	30	30								30						
Chemicals	520	409	80	28	3					71	65	20	364			
Coal	87,945	60,431	25,257	2,257						34,389	1,896	30,061				21,599
Coffee	46							46		46						
Cork	139	103		36						36			103			
Cotton, raw	8,343	8,343											8,343			
Creosote	5,004			5,004							5,004					
Earthenware	100		100											100		
Explosives	15	15									15					
Flour	125	74			51					125						
Glassware	420			420						420						
Hemp	5	5									5					
Jute	20	20									20					
Lard	1,192	35		1,100	57					92	1,100					
Linseed oil	3				3					3						
Liquor	1,028	15	905	90	18					149		604	15	250	10	
Live stock	60		60							60						
Lumber	7	7											7			
Manufactured goods:																
Iron and steel	70,301	55,415	9,652	3,606	428				1,200	11,197	17,704	16,015	24,408		977	
Machinery	16,536	12,514	3,825	145	52					1,910	801	4,457	9,136		232	
Railroad material	3,369	2,536	700	133						954	150	700	1,565			
Textiles	2,245	1,090	1,050	50	55					374	431	990	450			
Others	10,901	10,635	168	98						1,117	8,871	100	813			

Metals:																
Aluminum	240	240											240			
Iron	2,408	8	500	1,900						8	1,900	500				
Lead	56	56									56					
Nickel	13		10		3					13						
Silver	65	65									65					
Tin	7	7											7			
Others	104	29		75						75			29			
Nitrate of ammonia	1,817			1,817							1,817					
Oils, crude	158,307	12,358				145,949				61,066	43,305	1,250	7,509	26,129		19,048
Oils, refined	61,469	61,469								356	84	27,581	33,434	14		
Oyster shells	75	75									75					
Paper	3,775	2,099	264	612					800	596	930	1,054	1,185	10		
Rice	198	198								198						
Rosin	188	188											188			
Rubber	15	13			2					6			9			
Salt	723		598					125		143		580				
Silk	31	31											31			
Silver sand	2,492			2,492							2,492					
Skins and hides	4	4											4			
Soap	178	126	45		7					52	40		86			
Sugar	38,710						38,710					9,000	29,710			
Sulphur	12,350	12,350										12,350				
Tea	20		20							20						
Tobacco	3,885	3,885									260	825	2,800			
Turpentine	8	8											8			
Wax, paraffin	354	345			9					233			121			
Wheat	900	900										900				
General	128,548	59,220	38,435	23,765	6,322				806	28,865	39,359	30,838	26,282	1,508	1,696	
Totals	636,579	311,303	84,086	43,533	7,019	145,949	38,710	171	2,808	149,368	127,788	140,454	147,367	28,040	2,915	40,647

PACIFIC TO ATLANTIC.

(Figures represent tons of 2,240 pounds.)

Commodity.	From—							To—							
	Total.	West coast of South America.	West coast of United States.	Australasia.	Far East.	West coast of Canada.	West coast of Central America.	East coast of United States.	British Isles.	Other Europe.	Azore Islands.[1]	West Indies.[1]	West Indies.	Cristobal, C. Z.	East coast of Canada.
Automobiles	4	1	2	1				2	1					1	
Balsam	2						2							2	
Bark, Peruvian	4	4												4	
Barley	19,908	1,974	17,934						19,524	330			54		
Beans	3,223	300	2,898		25			2,933		290					

[1] For orders.

PACIFIC TO ATLANTIC—Continued.

Commodity.	Total.	From—						To—							
		West coast of South America.	West coast of United States.	Australasia.	Far East.	West coast of Canada.	West coast of Central America.	East coast of United States.	British Isles.	Other Europe.	Azore Islands.[1]	West Indies.[1]	West Indies.	Cristobal, C. Z.	East coast of Canada.
Bean oil	867				867			867							
Beeswax	500	500							500						
Borax	248	248						248							
Camphor oil	717				717			717							
Canned goods:															
Fish	3,236		3,236					291	1,989	956					
Fruit	2,892		2,892					1,458	1,432					2	
Meat	670			670					670						
Milk	230			230					230						
Vegetables	3		3											3	
Cacao	1,909	1,909						480	62					1,367	
Coffee	4,278	715	401				3,162	661	190	1,490				1,937	
Cocoa leaves	20	20												20	
Chemicals	113				113			113							
Clover seed	10	10							10						
Codfish	112				112			112							
Cold storage:															
Beef	4,772			4,772					4,772						
Butter	2,657			2,657					2,657						
Casein	350			350					350						
Cheese	2,968			2,968					2,968						
Mutton	7,640			7,640					7,640						
Tallow	3,221			3,221				153	3,068						
Others	463			463					463						
Copra	700		700					700							
Corn	5,191					5,191				5,191					
Cotton, raw	1,665	1,327	338					23	1,267					375	
Cotton seed	166	75	91						91					75	
Cotton seed cake	611	571	40						611						
Fruits:															
Fresh	813		811				2	474		337				2	
Dried	406		406					314	92						
Flour	11,726		6,074	5,650			2	1,978	9,746					2	
Hair	15		15					15							
Hardwood	407		287				120			287				120	
Hats	1	1												1	
Hay	75		75					75							
Hemp	1,686			1,354	332			1,336	350						

[1] For orders.

Horns	84	84								84					
Indigo	2						2							2	
Iodine	7	7								7					
Ivory nuts	183	183								183					
Leather	20	20								20					
Liquors	44	10			34			34	10						
Lumber	23,661	132	17,541		398	5,590		16,529	7,132						
Manufactured goods:															
Iron and steel	3						3							3	
Machinery	120		120					108						12	
Others	663		663					160	500					3	
Metals:															
Copper	13,304	10,004	1,950			1,350		7,180	1,271	700				4,153	
Iron	65		65					65							
Lead	3,116	16	2,100					2,100						16	
Silver	4						4							4	
Zinc	340			340					340						
Others	386				386			386							
Nitrate	141,026	141,026						52,215	22,245	39,465	15,524	11,577			
Oats	1,000			1,000					1,000						
Oils, refined	24,402	5,436	18,966					11,000		7,143				823	5,436
Ores:															
Arsenic	17				17			17							
Copper	1,069	1,069							1,030					39	
Manganese	1,000				1,000			1,000							
Silver	1	1							1						
Tin	694	694							394	300					
Others	64	64							64						
Paper	713	13				700		700						13	
Peanuts	23				23			23							
Porcelain	142				142			142							
Rubber, raw	228				228			228							
Silk	470				470			470							
Skins and hides	750	196	225	255	74			206	276	225				43	
Sugar	8,979	8,841					138	500	8,341					138	
Tea	294		49		245			294							
Wheat	57,764	2,604	48,224	6,936					17,788	39,976					
Wood oil	103				103			103							
Wool	3,615	396	9	2,788	422			431	3,153	22				9	
General	80,149	18,236	16,288	22,617	13,945	6,450	2,613	46,295	29,653	1,365			1,099	1,737	
Totals	447,984	196,687	142,403	63,912	19,653	19,281	6,048	153,136	151,881	98,371	15,524	11,577	1,153	10,906	5,436

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight April 16, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Advance	7	18.15	10	6.11	10	13.55	10	15.05	American	Panama Railroad Steamship Line	295.0	38.0	15.6	New York	Guayaquil	General	400	2,947	2,113
Ebro	9	3.54	10	6.12	10	14.50	10	16.00	British	Pacific Steam Navigation Co	450.0	57.0	22.3	New York	Valparaiso	General	1,675	9,089	6,215
Ocean Monarch	9	11.36	10	6.20	10	15.46	10	16.53	British	Monarch Steamship Co	398.0	48.0	23.0	New York	Manila	General	5,250	4,810	3,558
Anson S. Brooks	7	7.28	10	7.10	10	16.26	10	17.25	American	Brooks Scaulon Corp	273.0	43.0	24.0	Galveston	Portland	Sulphur	3,100	3,031	1,924
San Fernando	9	14.29	10	8.15	10	19.54	10	21.32	British	Eagle Oil Transportation Co	530.4	69.4	31.4	Tampico	Singapore	Fuel oil	16,117	13,266	9,609
La Habra	9	19.45	10	9.08	10	20.08	10	22.37	Norwegian	W. Wilhelmsen	424.8	57.0	26.0	Tampico	Iquique	Fuel oil	9,200	7,053	5,085
Kofuku Maru	10	6.21	10	11.35	10	20.32	11	21.36	Japanese	Kokusai Kisen Kabushiki Kaisha	385.0	51.0	23.3	New York	Manila	Gasoline	5,641	5,920	4,409
Orteric	10	12.18	11	6.05	11	14.09	11	15.25	British	Andrew Weir & Co	411.6	55.6	29.0	Norfolk	Manila	Coal	8,535	7,159	5,309
Tregarthen	10	13.53	11	6.22	11	15.25	11	16.38	British	Edward Hain & Son	369.8	51.1	23.1	New Orleans	Dunedin	General	5,229	5,178	3,971
Julia Luckenbach	11	2.39	11	7.00	11	16.12	11	17.03	American	Luckenbach Line	436.0	57.0	26.0	New York	San Francisco	General, steel	6,200	8,543	6,427
Salvador	3	20.55	11	11.05	11	17.40	11	18.44	British	Pacific Steam Navigation Co	225.0	35.4	14.4	Cristobal	Champerico	General	733	1,213	692
Port Curtis	11	3.15	11	8.05	11	17.12	11	18.10	British	Commonwealth and Dom. Line	450.2	58.4	27.0	New York	Sydney	General	6,711	8,500	6,140
Pacifico	9	19.20	11	13.09	11	21.04	11	22.02	Norwegian	Arthur Mathensen	330.0	46.0	12.9	La Guayra	San Francisco	Ballast		3,887	2,699
R-25 [1]			11	6.20	11	17.21			American	United States Navy				Cristobal	Balboa				
S. C. 287			11	6.20	11	17.21			American	United States Navy				Cristobal	Balboa				
Cedar Branch	11	15.23	12	6.35	12	13.36	12	15.45	British	F. & W. Ritson	390.0	52.0	18.0	Liverpool	Chile	General	2,639	4,912	3,642
Hurunui	11	17.07	12	6.40	12	15.17	12	16.10	British	Federal Steam Navigation Co	480.0	62.0	30.4	New York	Auckland	General	10,880	10,213	7,282
Quillota	9	6.35	12	7.17	12	16.24	12	17.15	British	Pacific Steam Navigation Co	361.4	46.2	22.0	New York	Guayaquil	General	202	4,768	2,956
Canadian Planter	12	7.52	12	9.08	12	17.36	12	21.00	British	Canadian Government	400.3	52.0	24.0	St. John	Wellington	General	6,000	5,842	4,092
Bath	12	7.50	13	7.38	13	14.42	13	16.00	American	United States Navy	329.2	46.2	21.7	Norfolk	San Diego	Naval supplies	3,300	3,945	2,564
Santa Elisa	13	5.55	13	10.30	13	16.37	13	18.55	American	W. R. Grace & Co	360.5	51.7	23.1	New York	Valparaiso	General	3,392	5,957	4,325
Sarpfos	12	18.40	13	11.35	13	18.22	13	19.53	Norwegian	Thor. Thorsen	254.0	39.0	12.1	Cartagena	Guayaquil	General	108	2,064	1,479
J. A. McKie [2]			13	7.30	13	9.31			American	United States Army				Cristobal	Gatun Lake				
San Joaquin	13	15.13	14	6.15	14	14.46	14	16.10	Norwegian	W. Wilhelmsen	425.0	57.0	26.0	Tampico	Antofagasta	Fuel oil	9,300	7,059	5,076
D. G. Schofield	13	23.30	14	7.00	14	15.32	14	16.30	American	Standard Oil Co	439.5	58.0	27.6	Baton Rouge	Seattle	Gasoline	10,000	8,912	6,254
Willsolo	14	8.12	14	8.45	14	17.03	14	18.15	American	Williams Steamship Co	434.3	57.7	23.4	Philadelphia	Portland	General	5,660	7,983	5,882
Acajutla	24	21.50	14	9.20	14	16.11	14	17.00	British	Pacific Steam Navigation Co	215.0	33.5	13.6	Cristobal	Guayaquil	General	321	1,273	706
Ortega	13	13.36	14	10.15	14	18.25	14	19.30	British	Pacific Steam Navigation Co	465.0	56.0	24.0	Liverpool	Valparaiso	General	1,668	8,345	4,998
Ulysses [3]	14	11.40	14	12.00	14	19.25			American	Panama Railroad Steamship Line	514.0	63.0	30.0	Norfolk	Balboa	Coal	11,098	11,519	6,930
San Juan	10	16.05	14	13.40	14	20.10	14	22.25	American	Pacific Mail Steamship Co	283.0	37.0	15.0	Cristobal	San Francisco	General	450	2,379	1,593
Huasco	9	15.13	15	6.17	15	13.34	15	14.25	Chilean	South American Steamship Line	379.0	44.0	22.6	Cristobal	Valparaiso	General	1,214	4,552	3,182
Huallaga	10	17.20	16	6.13	16	13.34	16	15.20	Peruvian	Peruvian Steamship Line	360.0	44.7	20.6	Cristobal	Callao	General	1,138	4,514	2,386
Iquitos	11	11.36	16	7.08	16	16.12	16	17.25	Peruvian	Peruvian Steamship Line	350.0	42.5	17.4	Immingham	Callao	Ballast		3,535	2,252
Artigas	16	6.54	16	7.15	16	14.52	16	15.52	American	North Atl. & Western Co. (S. B.)	390.0	54.0	18.9	Portland, Me.	Portland Oreg	General	2,293	6,161	4,427
Texan	16	8.15	16	8.45	16	17.07	16	18.00	American	American-Hawaiian Line	471.0	57.2	19.0	New York	Los Angeles	General	2,100	9,154	7,033

[1] Submarine. [2] Launch. [3] Collier.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

San Juan	9	10.30	10	6.35	10	16.05	14	13.40	American	Pacific Mail Steamship Co.	283.0	37.0	16.1	San Francisco	Cristobal	(6)	762	2,379	1,593
Nichiyo Maru	10	6.30	10	8.19	10	17.35	10	19.30	Japanese	Yamashita Steamship Co.	331.0	48.0	20.0	Tocopilla	Cristobal [5]	General	4,881	3,569	2,651
Huallaga	10	6.40	10	9.17	10	17.20	16	6.13	Peruvian	Peruvian Steamship Line	360.0	44.7	21.3	Ylo, Peru	Cristobal	General	1,664	4,514	2,386
Orcoma	10	8.30	10	11.24	10	18.30	11	15.25	British	Pacific Steam Navigation Co.	511.6	62.4	27.6	Coronel	Liverpool	General	4,948	12,267	7,942
Halway	8	13.39	10	12.25	10	19.31	11	4.20	American	Columbus Shipping Co. (S. B.)	435.0	56.0		Balboa	Mobile	Ballast		7,643	5,319
Mary K. [2]									American	W. H. Walston				Balboa	Gatun				
Mont Cervin	11	4.00	11	8.10	11	17.32	12	19.20	French	Soc. Generale Transport	340.6	49.7	22.0	Portland	Saleme, Italy	Grain, general	4,833	4,070	2,933
Haughland	11	5.15	11	9.17	11	17.43	12	6.15	Norwegian	N. Rogenos	325.0	47.0	22.0	Tocopilla	New York	Copper	4,402	3,386	2,235
Milan Maru	11	7.30	11	9.30	11	18.50	11	20.20	Japanese	Kokusai Kisen Kabushiki Kaisha	400.0	53.0	25.6	Iquique	Norfolk	Nitrate	8,022	5,886	4,303
Hawkeye State	11	7.28	11	14.50	11	22.10	11	23.20	American	Matson Navigation Co. (S. B.)	517.0	72.2	27.0	San Francisco	New York	Sugar, general	5,629	15,234	10,471
S. C. 287					11	22.10			American	United States Navy	110.0	16.0		Pedro Miguel	Cristobal				
Essequibo	11	20.00	12	6.26	12	14.15	13	12.14	British	Royal Mail Steam Packet Co.	450.3	57.8	25.0	Valparaiso	New York	General	2,930	9,037	6,089
Kinderdijk	12	14.40	12	15.12	12	22.55	13	11.18	Dutch	Holland-American Line	469.0	58.0	27.0	Vancouver	Rotterdam	General	9,400	8,515	6,068
Oneka	12	16.15	13	6.23	13	15.30	13	15.30	British	Standard Transportation Co.	411.8	52.3	19.0	Shanghai	New York	Ballast		6,398	4,841
Santa Teresa	12	23.30	13	8.30	13	16.05	13	16.50	American	W. R. Grace & Co.	360.2	51.6	21.0	Valparaiso	New York	(7)	1,800	5,726	4,086
Waiwera	13	4.30	13	8.39	13	18.15	14	14.52	British	Shaw-Saville & Albion Co.	425.7	54.1	24.0	Auckland	London	Frozen, general	5,000	7,468	5,433
Charles H. Cramp	13	5.00	13	8.53	13	16.55	13	16.55	American	Atl. Gulf. & Pac. S. S. Corp. (S.B.)	404.6	53.9	18.0	San Francisco	Baltimore	General, fruit	2,500	6,755	4,688
Lake Ellicott	13	6.50	13	9.25	13	19.00	14	6.15	American	N. O. & S. A. Shipping Co. (S.B.)	253.4	43.8	22.6	Junin	Jacksonville	Nitrate	3,713	2,920	1,973
Angelo Toso	12	13.15	13	12.50	13	20.28	14	9.45	Italian	Soc. Nazionale di Nav.	396.8	52.4	18.0	Valparaiso	Genoa	General	800	6,379	4,659
Alaska Maru	13	16.45	14	6.23	14	18.06	14	18.37	Japanese	Osaka Shosen Kaisha	420.0	56.0	22.0	Singapore	New York	General	3,816	7,460	5,307
Belridge	14	6.50	14	7.36	14	18.58	14	20.35	Norwegian	Wilhelm Wilhelmsen	425.1	57.0	16.0	Tocopilla	Port Lobos	Ballast		7,065	5,095
Pakeha	14	8.00	14	9.45	14	20.15	14	21.30	British	Shaw Saville & Albion Co.	477.0	63.0	26.0	Wellington	London	Frozen, general	6,862	10,995	8,173
Iowan	14	7.57	14	10.01	14	20.26	14	20.33	American	American-Hawaiian Line	407.7	53.7	22.0	Seattle	New York	Lumber, general	5,000	7,091	5,054
Harald	14	7.10	14	12.40	14	21.40	14	23.00	Danish	United Steamship Co.	272.4	39.1	15.6	Buenaventura	Cristobal [5]	(8)	945	1,673	1,147
Lake Fithian	14	16.00	15	6.20	15	14.31	15	14.31	American	N. O. & S. A. Steamship Co. (S. B.)	253.4	43.8	24.0	Tocopilla	Charleston	Nitrate of soda	3,928	2,915	1,906
Liebre	14	18.30	15	8.09	15	15.17	16	8.55	American	General Petroleum Corp.	435.0	56.2	23.5	Los Angeles	Tampico	General	680		
Bourne	14	17.50	15	8.27	15	16.25	15	23.45	British	D. Pinkay	449.7	58.2	24.6	Valparaiso	Amsterdam	Nitrate, general	8,280	7,539	5,450
Coalinga	15	3.00	15	8.39	15	16.57	15	18.01	American	Union Oil Co.	471.0	55.0	19.0	Los Angeles	Port Lobos	Ballast		8,107	5,627
South American	15	6.00	15	9.03	15	18.00	16	12.08	British	South American Steamship Co.	251.0	43.6	20.1	Valparaiso	New York	(9)	3,170	2,444	1,593
Dorset	16	4.00	16	8.14	16	15.40	16	21.15	British	Federal Steam Navigation Co.	460.0	58.2	21.6	Wellington	Southampton	(10)	4,596	9,009	6,406
Stuartstar	16	4.10	16	8.37	16	17.28	16	20.30	British	Blue Star Line	420.0	54.0	21.8	Lyttleton	Bristol channel	(5) (11)	3,533	7,039	5,488
Toyohashi Maru	16	7.40	16	9.06	16	17.55	16	19.30	Japanese	Nippon Yusen Kaisha	445.0	58.0	17.6	Kobe	New York	General	1,785	7,666	5,529
Satterlee [4]	2–24	15.13	16	10.15	16	18.35			American	United States Navy	310.0	30.11		Balboa	Cristobal				
Matincock	16	11.55	16	12.39	16	19.46	16	19.46	American	Standard Oil Co.	459.1	60.0	20.0	San Francisco	Baton Rouge	Ballast		8,171	6,379
Baarn	16	3.00	16	15.03	16	21.35	16	21.35	Netherlands	Royal Netherlands S. S. Co.	400.0	52.3	20.6	Puntarenas	Boston	Wool	3,700	6,981	5,465

[4] Destroyer. [5] For orders. [6] Sugar, coffee, wood, and treasure ($92,612.83). [7] Nitrate and copper ores. [8] Coffee, cocoa, and hides. [9] Mineral ore, copper, and sugar.
[10] Frozen meat and general. [11] Cold stores and general. * Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
April 10	Solano	Pacific Mail Steamship Co.	Tampico.	April 11	Atlas [12]	Curacasche Scheepvart	Curacao.
April 11	Abangarez	United Fruit Co.	New Orleans.	April 12	Stuyvesant	Royal Netherlands W. I. Mail	Port Limon.
April 11	Stuyvesant	Royal Netherlands W. I. Mail	Amsterdam via wayports.	April 12	Electrician	Harrison Line	Galveston.

[12] Tug.

(Continued on page 568, column 2.)

Lengths and Drafts of Commercial Vessels Passing Through the Canal in March.

A classification of the commercial vessels passing through the Canal in March, by lengths and salt-water drafts, gives the following:

	Atlantic to Pacific.	Pacific to Atlantic.	All vessels.	Per cent of all ships.
Length.				
Less than 100 feet	3	2	5	2.0
100 to 200 feet	2	2	4	1.6
200 to 300 feet	21	16	37	14.5
300 to 400 feet	39	32	71	27.8
400 to 500 feet	68	61	129	50.6
500 feet and over	7	2	9	3.5
Total	140	115	255	100.0
Draft.				
Less than 15 feet	14	11	25	9.8
15 to 20 feet	24	26	50	19.6
20 to 25 feet	45	41	86	33.7
25 to 30 feet	55	34	89	34.9
30 feet and over	2	3	5	2.0
Total	140	115	255	100.0

The aggregate length of the above commercial ships totaled 97,301 feet, making an average length of 381.6 feet. The aggregate draft of all vessels totaled 6,639.6 feet, giving an average of 26.

The ship of greatest length through the Canal during March was the steamship *Orduna*, of the Pacific Steam Navigation Company, with a length of 550.3 feet. She was bound from Valparaiso for Liverpool, laden with 5,948 tons of nitrate.

The vessel with the greatest salt-water draft was the steamship *Ulysses*, a collier operated by the Panama Railroad Steamship Line. Her salt-water draft was 30.3 feet; she was bound from Norfolk to Balboa, with 12,052 tons of coal.

Shipment of Canadian Wheat via the Panama Canal.

The motorship *Buenos Aires* of the Johnson Line, passing through the Canal northbound on February 9, carried 3,200 tons of wheat shipped from Vancouver to London, in addition to other cargo taken on at San Francisco and Los Angeles. The *London Times* of March 1 contained an article on this voyage, under the heading "Canadian Wheat via Panama," from which the following is quoted:

The Agent-General for British Columbia, Mr. F. C. Wade, K. C., stated that the voyage of this ship was destined to become historic, inasmuch as it inaugurated a revolution in the transportation of wheat from the central provinces of Canada to Europe. This use of the Panama Canal would in time make the Pacific Ocean, instead of the Atlantic, the "front door" of Canada.

The reason, he said, why the Pacific Coast of Canada had not hitherto been so well known as that of the Atlantic was that, while the latter was only some 3,000 miles distant from Europe, the former, by way of Cape Horn, was approximately 15,000 miles away. Through the Panama Canal the Pacific would one day become the center of action and commerce of the entire world.

This shipment of wheat via Vancouver, the Agent-General explained, had to a certain extent been forced upon the farmers. When, after the harvest last year, they found it impossible to get the price they wanted, owing to the removal of the Government control, they held up their stocks of wheat in the hope that the price would rise. Of the total Canadian 1920 wheat crop, measuring 263,000,000 bushels, Canadian elevators held 44,250,000 bushels on December 11, and vast quantities had not even been put on the railway.

Most of the wheat from the three prairie provinces, Manitoba, Saskatchewan, and Alberta, which last year amounted to 234,000,000 bushels, was at normal times sent to Europe through the Great Lakes and the St. Lawrence River, but last year, while stocks were being "held up," these waterways in November became frozen over, and

when in due course it was decided to export the wheat the only alternative route eastward was that of the railway right through to St. John or Halifax. This course could only be taken at a cost very much greater than that of sending the grain through the Rockies to Vancouver.

Not only would other ships follow the *Buenos Aires* with grain, said Mr. Wade, but other Canadian products would come to the United Kingdom and the Continent, in ever-increasing quantities, through the Panama Canal.

* * * The distance from Liverpool to Victoria by the Panama Canal is 8,892 nautical miles as against 14,558 around Cape Horn.

From the opening of the Canal, considerable shipments of wheat have been made from Pacific ports of the United States, as well as from Australia, New Zealand, and Chile, to Atlantic ports of the United States and to Europe; but wheat from the great grain provinces of Canada destined to Atlantic areas has for the most part gone over the Great Lakes and through the St. Lawrence.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs, during the week ended April 16:

U. S. S. *Satterlee*, structural repairs to afterstarboard side, deck, and steering gear and renewing stem, due to collision, miscellaneous small maintenance jobs on main and auxiliary machinery; launch *Vacuum, Jr.*, repairing damaged bow, renewing floor and hatch covers, and reinstalling engine; U. S. submarines *O–12*, *O–13*, and *O–15*, periodical overhaul, including docking, cleaning, and painting bottom and inside superstructure; renewing deteriorated plates and frames in superstructure and repacking stern glands; overhauling sea valves and trimming systems; cleaning and coating tanks; miscellaneous small items of adjustment and repairs to machinery; barges *Nos. 137* and *138*, docking, staging, cleaning, and painting bottom, cleaning and painting inside and out; renewing hopper sheathing and strongback sheathing, and rebuilding strongbacks and A-frames; overhauling operating gear; barge *No. 201*, renewing plates, fenders, and deck on one corner where damaged; rebuilding stanchions and roof; launch *Coco Solo*, renew stem, repair monkey rails and copper sheathing; tug *Favorite*, renewing section of stem and installing new sections of plate in three top strakes where damaged by collision; U. S. submarine *R–25*, dock, clean, and paint bottom, test and repair fuel and ballast tanks, overhaul sea valves; tug *Gorgona*, dock, clean, and paint bottom, electric weld propeller, straighten rudder stock, overhaul sea valves, overhaul fire pump, install new general service pump, renew water end on sanitary pump, overhaul galley smoke pipe; steamships *Circassian Prince*, docking, cleaning, and painting bottom; overhauling sea valves, installing 4 doublers on bow, overhauling pistons and valves on main engine, and overhauling 4 direct-connected pumps on main engine; overhauling fire system on deck; *Tregantle*, docking, cleaning and painting bottom, renewing stem and 9 frames port and starboard; repairing and renewing plates back to No. 10 frame to upper 'tween deck level; repairing one broken anchor and overhauling anchor cables; repairing cracked hawse pipes, all the above being result of collision at sea; *Derblay*, repairing one feed pump plunger and welding feed pump head; *Angelo Toso*, installing 2 closed chocks aft; *Ulysses*, cleaning fire side of boilers, renewing 2 staybolts in boilers, scaling and painting top sides.

The following vessels were at the Cristobal shops for repairs, during the week ended April 18:

Steamships *Panama*, *Colon*, *Cristobal*, *Ulysses*, and *General W. C. Gorgas*, minor repairs to engine, deck, and steward departments; U. S. submarine *O–14*, renew battery and hull ventilation ducts; make and install new anchor shaft, etc.; steamship *Balboa*, refasten valve seats on circulating pump; renew 2-inch sanitary line on port side, etc.; tug *Atlas*, examine propeller shaft and repair as directed; unship 2 fuel pumps and install 2 new pumps; tanker *Doewa*, alter crew accommodations; manufacture, fit, and install steel water-tight doors as per plan furnished; examine and repair gravity tank valves, etc.; steamship *Manavi*, rebore stem end of Weir's pump; dry dock, clean, and paint; manufacture and install new funnel, etc.; U. S. S. *Hannibal*, electric weld back connections in 6 furnaces; steamship *Stuyvesant*, supply vacuum gauge and make brass fittings for same; repair water tank in galley; blow out fresh water line, etc.; dredge *No. 86*, tug *Engineer*, steamship *Cauca*, U. S. S. *Satterlee*, steamships *Caribbean*, *Martinique*, *Pastores*, minor repairs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending April 16, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Advance	Panama Railroad Steamship Line		April 10		31
Ebro	Pacific Steam Navigation Co		April 10		146
Salvador	Pacific Steam Navigation Co		April 11		741
Quillota	Pacific Steam Navigation Co	April 10	April 12	160	9½
Solana	Arrow Oil Co	April 10	April 12	10,000	(1)
San Juan	Pacific Mail Steamship Co	April 10	April 14	751	493
Huallago	Peruvian Steamship Line	April 10	April 16	1,658	1,149
Stuyvesant	Royal Netherlands W. I. Mail	April 11	April 12	37	(1)
Electrician	Harrison Line		April 12		12
Abangarez	United Fruit Co	April 11	April 14	487	144
Pastores	United Fruit Co	April 12	April 13	2	12
Sarpfos	Caribbean Steamship Co	April 12	April 13	35	108
Cristobal	Panama Railroad Steamship Line	April 12	April 16	9,799½	(1)
Metapan	United Fruit Co	April 13	April 13	¼	20
Montevideo	Spanish Line	April 13		364	
Panama	Panama Railroad Steamship Line		April 13		1,465
Angelo Toso	National Navigation Society	April 13	April 14	9	(1)
Sixaola	United Fruit Co	April 13	April 14	500	241
Ortega	Pacific Steam Navigation Co	April 13	April 14	9	(1)
Tivives	United Fruit Co	April 14	April 14	½	½
Colon	Panama Railroad Steamship Line		April 14		1,343
Acajutla	Pacific Steam Navigation Co		April 14		356
Huasco	Chilean Steamship Line		April 15		1,220
Martinique	French Line	April 15		67	
Stuyvesant	Royal Netherlands W. I. Mail	April 16	April 16	1/5	392
Kenuta	Pacific Steam Navigation Co	April 16		34	
San Blas	United Fruit Co	April 16	April 16	45	(1)

[1] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending April 16, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Angelo Toso	Lorieta Huasala	April 12	April 15	203	9
Ulysses	Panama Railroad Steamship Line	April 14		11,998	
Peru	Pacific Steam Navigation Co	April 16	April 16	12	
Montebello	Union Oil Co	April 16		7,000	

No Work for Americans at Cartagena.

The American Consul at Cartagena, Colombia, advises that a number of American citizens have recently gone to Cartagena seeking employment, under the impression that the American Oil Companies operating in Colombia are taking on all men who go there. He states that conditions are such that there is no employment there for Americans. Unemployed Americans are warned not to go to Cartagena.

Quarantine Against Fruit Shipments from the Canal Zone.

Orders of the United States Department of Agriculture establish a quarantine (No. 49) effective April 1, 1921, for the protection of the United States against the introduction of the citrus black fly (*Aleurocanthus woglumi* Ashby) from the countries where this pest occurs; this includes the Canal Zone and Panama. Copies of this order and of its supplementary regulations have been furnished The Panama Canal and may be secured on application to the Executive Office at Balboa Heights. Clean fruits and vegetables, other than those subject to special quarantines, may be imported from the countries named in this quarantine under permit upon compliance with the regulations. These include provisions for careful inspection at the port of entry and disinfection if infested. If the shipment is very badly

infested, so that in the opinion of the federal inspector it can not be properly cleaned or disinfected, then the entire shipment may be refused entry. No leaves, twigs, or other portions of plants, or plant litter or rubbish may be used as packing for the fruits and vegetables, and any shipment containing such portions of plants, as distinguished from clean fruits and vegetables, may be denied entry. No restriction is placed on the entry of processed fruit and vegetables.

This quarantine was placed into effect only after a public hearing was held at Washington, D. C., last December. The Department of Agriculture conducted an intensive study of this pest on the Canal Zone, and these data (published as Bulletin No. 885), together with data from Cuba, Jamaica, and other localities, furnished the necessary facts on which this order is based. Bulletin No. 885 is entitled "The Black Fly of Citrus and Other Subtropical Plants," and was prepared by Harry F. Dietz, formerly entomological inspector of the Bureau of Entomology, and James Zetek, formerly entomologist of The Panama Canal. Copies of this bulletin are in the Canal library.

A letter from Mr. Zetek says "It is undoubtedly a pest which should be kept out of the United States. It came to the Canal Zone in all probabilities in some shipments of plants from Jamaica—and it is probable also that the Jamaican, whose habit it is to carry with him some plants, brought an infested citrus plant when he came to help dig the Canal."

"The Canal Zone and Panama," he adds, "needs protection also through adequate quarantine to keep out bad insect pests and plant diseases."'

Official Circulars.

Acting Chief Clerk.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 14, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective this date, and while Mr. John H. Smith is Acting Executive Secretary, Mr. C. M. Lupfer will be Acting Chief Clerk, *vice* Mr. R. S. Erdman who has entered on leave of absence.

JAY J. MORROW,
Governor.

Executive Order.—Tariff and Regulations Governing Public Passenger Conveyances.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., March 31, 1921.

CIRCULAR No. 601-117:

By virtue of the authority contained in Section 21, the Executive Order quoted below is hereby made effective May 1, 1921, and is published for the information of all concerned.

JAY J. MORROW,
Governor.

Regulations establishing maximum rates of fare and governing transportation of passengers for hire in the Canal Zone.

By virtue of the authority vested in the President by the Act of Congress approved August 21, 1916, and mutual agreement having been heretofore made with the Republic of Panama touching the reciprocal use of the highways of the Canal Zone and the Republic of Panama, as by said act authorized, the following regulations establishing maximum rates of fare and governing the transportation of passengers for hire by horse-drawn and self-propelled vehicles over the highways of the Canal Zone, and between points in said Canal Zone and the cities of Panama and Colon, in the Republic of Panama, are hereby established:

SECTION I. Charges over the scheduled routes set forth in Schedules A and B and made a part hereof, shall be based on a ZONE FARE of $0.15 U. S. currency for one adult passenger for continuous travel between any two points in any one fare zone without entering into another zone. This ZONE FARE will be called the base rate of fare.

For the purpose of interpreting these regulations, all persons over 12 years of age shall be called "adult passengers," and all persons under 12 years shall be called "children."

An increase of 50 per cent of the base rate will be allowed for each additional adult passenger, provided that this increase shall not be less than $0.10 for each additional adult passenger. These charges shall apply to all persons except children, under 6 years of age accompanied by adult, who shall be carried free, and children between 6 and 12 years of age accompanied by adult, whose fare shall be one-half the tariff rate; children regardless of age, not accompanied by adult shall be charged the full tariff rate and where children under 6 years are accompanied by adult, one-half fare shall be charged for each child in excess of two.

SEC. II. The following examples will show method to be followed in figuring fares:

For two adult passengers carried between two points within the same fare zone, the fare will be the base rate of $0.15 for first passenger, plus minimum increase of $0.10 for second passenger, or a total of $0.25 for both passengers.

For three adult passengers carried between two points within same fare zone, the fare will be the base rate of $0.15 for first passenger, plus minimum increase of $0.10 for each of the two additional passengers, or a total of $0.35 for the three passengers.

For four or more passengers within same fare zone the rate will be figured in the same manner as shown in last two paragraphs.

SEC. III. For continuous travel between two points in different zones, the same method will also be followed, for example:

For one adult passenger the fare will be the base rate of $0.15 for the first zone, plus the base rate of $0.15 for each additional zone entered or crossed.

For more than one passenger carried between points in different zones the fare will be the total base rate for one passenger at end of trip, plus 50 per cent of total base rate for each additional passenger.

Thus, the fare for two or more passengers carried from one point in a zone to a point in an adjoining zone would be the base rate of $0.15 for one passenger for first zone, plus the base rate of $0.15 for same passenger in second zone, or total base rate of $0.30 for first passenger. For second passenger there will be added the 50 per cent of the total rate of $0.30, or a total of $0.45 for two passengers; for third passenger, add again 50 per cent of the total base rate of $0.30, making a total fare of $0.60 for the three passengers.

SEC. IV. A base rate is established for travel between fare zones and certain specified interior locations in Canal Zone and Republic of Panama, outside of or not included in fare zones, base rate of fare of which will be for one passenger plus 50 per cent of base rate for each additional passenger, with the same provisions as to half-fares (rates for children); travel between established fare zones and beyond the interior locations in Canal Zone and Republic of Panama, specified in Schedules A and B, will be at hourly rate or by special agreement.

Where a trip begins or ends at a point beyond the established fare zones, at a location not specified in Schedules A and B, but not beyond the farthest location specified, the fare shall be the fare to and from the next farthest specified location. For example: Travel to and from Balboa fare zone to and from a point between the specified location of Diablo, the fare shall be the schedule fare between Balboa fare zone and Diablo interior location.

SEC. V. Any half-fares as established by regulations to be figured on same basis as shown in preceding sections, as an adult passenger and child between 6 and 12 years for travel between two points in same zone, base rate fare of $0.15 for adult plus one-half of minimum fare of $0.10 for child passenger or $0.05, or total of $0.20 for the two passengers; travel between points in different zones where half-fares are allowed, to be figured in same manner.

SEC. VI. SCHEDULE A.

SOUTHERN DISTRICT.

The Southern District, Schedule A, includes the fare zones of:

1st Panama City Zone
Ancon Zone
Balboa Zone
Heights Zone
La Boca Zone
2d Panama City Zone
3d Panama City Zone and
Specification Location Table

Fare zones are outlined and bounded as follows:

1st Panama City fare zone—Entire area of Panama City embraced within line beginning at Panama City Market (embracing districts of San Felipe, Santa Ana, and Chorrillo) thence northerly following Panama Railroad main line and yards to San Miguel crossing, thence to Ancon laundry, thence following Chame Street, Ancon Boulevard, Frangipani Street, Gorgas Road to Ancon Hospital entrance and nurses' quarters, thence following Columbia Road to junction with Ancon Hospital service road, thence southerly to junction of Canal Zone and Republic of Panama boundary line and Gavilan Road. (Includes Old Administration Building and Cable Heights) thence easterly and northerly following shore line to Panama City Market, the starting point.

Ancon fare zone—Area within line beginning at San Miguel crossing, thence following line of Panama Railroad main line to Balboa railroad station, thence following Gorgona Road to Ancon Boulevard to Administration Building, thence following Heights Road to Cascadas Road, to Ancon Boulevard (including San Juan Place) to Frangipani Street, to Gorgas Road to Ancon Hospital entrance and nurses' quarters, thence following Columbia Road to junction with Ancon Hospital service road, thence southerly to junction 4th July Avenue and Balboa Road (includes Old Administration Building and Cable Heights) thence northerly following 4th July Avenue to Tivoli Avenue to starting point (San Miguel crossing).

(NOTE—It will be noted that the 1st Panama City Zone and the Ancon fare zone overlap, embracing certain same areas; this has been done in order to place within the Panama City fare zone certain locations in Ancon between which and Panama City there is a large amount of travel and thus enable passengers traveling between Panama City and certain locations in Ancon, and *vice versa*, to avoid being required to pay more than one fare.

Balboa fare zone—Area within a line beginning at Balboa railroad station, thence following Roosevelt Avenue to Balboa Road, to Pier 18, thence following Docks 17, 16, 15, 14, 13, to Dock 9 and entrance to Balboa dry dock, thence southeasterly to junction of Union Place and La Boca Road, thence southeasterly to head of Empire Street, thence southeasterly to junction Canal Zone and Republic of Panama boundary line and Gavilan Road, thence following boundary line to Balboa Road to Morgan Avenue to Prado, thence easterly to Administration Building, thence following Ancon Boulevard to Gorgona Road, to starting point Balboa Railroad station.

Heights fare zone—Area within line beginning Administration Building Balboa Heights, thence southerly to head of Ridge Road, thence southerly to Quarry Heights military reservation including military headquarters and quarters within reservation north of Quarry Road, thence following Quarry Road to Gorgas Road to service road through Ancon Hospital wards, to Columbus Avenue to Gorgas Road to Darien and Sosa Place to Lion Hill Road to Cascadas Road to Heights Road, to starting point, Administration Building.

La Boca fare zone—Area south of line beginning at entrance Balboa dry dock and following same southeasterly line as described in Balboa fare zone to junction of Canal Zone and Republic of Panama boundary line and Gavilan Road, La Boca fare zone will include the Radio, Fort Amador and Quarantine Reservation, Coaling Plant and La Boca townsite.

2d Panama City fare zone—Districts of Calidonia and Exposition, extending from Panama railroad east to Bull Ring and including Pena Prieta.

3d Panama City fare zone—District of Bella Vista including the bathing beach.

(*See table Specified Locations and Fare Zones, Southern District, page 567.*)

For the purpose of computing fares between Panama City zones, Balboa, and La Boca fare zones, the shortest and most direct route between points in Panama City north and west of H Street and 15th Street, to points in La Boca and Balboa fare zones, shall be through Ancon fare zones by way of Ancon Boulevard; and for points south and east of H Street and 15th Street, by way of B Street and Balboa Road, and *vice versa*.

SEC. VII. SCHEDULE B.

NORTHERN DISTRICT.

The Northern District, Schedule B, includes the fare zones of:

Colon City
Cristobal
Piers
Mount Hope and
Specified Location Table.

SPECIFIED LOCATIONS AND FARE ZONES PANAMA REPUBLIC AND CANAL ZONE.

SOUTHERN DISTRICT.

Locations and Fare Zones.	Diablo.	Corozal.	Fort Clayton.	Filtration Plant and Locks, Miraflores.	Pedro Miguel.	Paraiso.	Las Sabanas Police Station	Golf Club.
1st Panama City	.....	.....	.....	.....	.....	.....	.....	.....
2d Panama City	.....	.....	.....	.....	.....	.....	.....	.....
3d Panama City	.....	.....	.....	.....	.....	.....	.....	.....
Ancon	$0.40	$0.75	$1.00	$1.50	$2.00	$2.25	$0.85	$1.00
Balboa	.....	.....	.....	.....	.....	.....	.....	.....
Heights	.....	.....	.....	.....	.....	.....	.....	.....
La Boca	.....	.....	.....	.....	.....	.....	.....	.....
Las Sabanas	.75	.75	1.25	1.75	2.25	2.50	.....	.25
Golf Club	1.00	1.00	1.50	2.50	2.50	2.75	.25	.....
Shriner's Mosque, Ancon	Add 10 cents U. S. currency to zone and location fares for each adult person carried to door of mosque on upper level.							

NORTHERN DISTRICT.

Locations and Fare Zones.	France Field.	Coco Solo and Fort Randolph.	Brazos Brook.	Mindi Dairy.	Fort Davis.	New Gatun.	Gatun.
Colon City	.....	.....	.....	.....	.....	.....	.....
Cristobal	$1.50	$2.00	$1.00	$1.50	$1.75	$2.00	$2.25
Piers and Mount Hope	.....	.....	.....	.....	.....	.....	.....

Fare zones are outlined and bounded as follows:

Colon City fare zone—Entire area of Colon City and part of Old Cristobal north and east of line beginning at Cristobal Piers Entrance, thence along Roosevelt Avenue southeasterly to De Lesseps Building, to Columbus Avenue, to Canal Street, to Market Street, to Bolivar and 14th Streets, thence following Canal Zone and Republic of Panama boundary to Folks River.

Cristobal fare zone—Area within line beginning at entrance to Piers, Roosevelt Avenue to Cristobal Fire Station, thence following Front Street to 8th Street, to Bolivar Street, to 14th Street, thence following Mount Hope Road to junction with E Street (Broadway), thence following Canal Zone and Republic of Panama boundary line to Folks River, thence following Mount Hope Road to Corral and Mount Hope silver quarters, including all quarters area north of line of Fort Randolph railroad branch line and including the Cristobal ball park, thence northwesterly to Coaling Station checking in shed at Camp Bierd, to Camp Bierd Road to Canal Street, to Columbus Avenue, to Roosevelt Avenue to Piers entrance.

(NOTE—It will be noted that the Colon fare zone, Cristobal fare zone, and Piers fare zone, overlap, embracing certain same areas; this has been done in order to place within the Cristobal fare zone, Colon City fare zone, and Piers fare zone, certain locations in Colon and Cristobal between which there is a large amount of travel, and thus enable passengers traveling between these locations to avoid being required to pay more than one fare.

Pier fare zone—Piers 6, 7, 8, 9, and Dock 10, and area within Piers enclosure, and area within line beginning at De Lesseps Building, Roosevelt Avenue and Columbus Avenue, and Dock 10, thence along Columbus Avenue to Canal Street and Market Street, thence northeasterly to Bolivar and 14th Streets, thence following Bolivar Street to 8th Street, to Front Street, to Roosevelt Avenue to Piers' entrance.

(NOTE—See explanation *re* overlapping of zone with Cristobal and Colon.)

Mount Hope fare zone—Area south of line beginning at checking in shed Coaling Station at Camp Bierd, easterly to Mount Hope Road, to junction Mount Hope Road and Fort Randolph Road at Diversion; area including Cristobal Shops and Mount Hope Cold Storage Plant.

(*See table Specified Locations and Fare Zones, Northern District.*)

SEC. VIII. Where a trip begins on line between or meeting point of fare zones, the trip shall be presumed to begin within the first fare zone entered, and where the trip ends on the line between or meeting point of fare zones, the trip shall be presumed to have been completed within the last zone traversed.

SEC. IX. Where a trip begins in one fare zone and ends in the same fare zone, but the line of travel between these two points arbitrarily requires traversing another zone or zones, additional fares will be charged for each different zone entered or crossed. For example from La Boca townsite to Fort Amador the line of travel is through La Boca Zone, into Balboa Zone and back into La Boca Zone to Fort Amador. The charge in such case will be a base rate of $0.15 for La Boca Zone, plus the base rate of $0.15 for Balboa Zone, or a total base fare of $0.30.

SEC. X. Vehicles shall, on request in advance by a passenger, operate on an hourly basis as follows:

Self-propelled vehicles—Three dollars for the first hour or fraction thereof, and $2.50 for each subsequent hour or fraction thereof exceeding one-half hour. The subsequent hourly charge for one-half hour or fraction less than one-half, to be one-half of the subsequent hourly charge.

In computing the hourly rates for self-propelled vehicles, charges will be based on a maximum of four passengers not including the operator; for passengers exceeding four, a charge of $0.50 per hour for each additional passenger may be made; charges for such additional passengers will be governed by same method of computing charges for fractional parts of hour as already outlined.

Horse-drawn vehicles—One dollar and 50 cents for the first hour or fraction thereof for one passenger, and $0.25 additional for each additional passenger for the first hour or fraction thereof, and thereafter $1.50 for each subsequent hour or fraction thereof exceeding one-half hour, without regard to number of passengers.

SEC. XI. When a vehicle is engaged at hourly rates at garage or public stand, time for purpose of computing fare shall begin when vehicle leaves garage or public stand.

When engaged at garage or public stand to call at another point for a trip between points within fare zones or specified locations, one base fare is authorized to be charged, for the travel, through zone or zones traversed, or to location, to the point where vehicle is boarded.

SEC. XII. Between the hours of 12 o'clock p. m. and 6 o'clock a. m. the rates set out in Schedules A and B and the hourly rates above estab-

lished for self-propelling vehicles may be increased 50 per cent, and the hourly rates for horse-drawn vehicles may be increased 25 cents per hour.

SEC. XIII. In all cases where the computation of fare results in a fraction of five cents a full five cents in lieu of such fraction may be collected.

SEC. XIV. For the use of any vehicle a special fare may be agreed upon which shall take the place of the rates herein fixed, but if in any such case a dispute shall arise the regular rate herein established shall govern unless the existence and terms of such special agreement be clearly shown. No charge shall in any case be made which is based upon the time of a delay not due to the fault of a passenger.

SEC. XV. A reasonable rate of speed shall be maintained at all times by all vehicles, and in travel between various zones or interior locations, the shortest and most direct available route of travel will be employed, unless agreement otherwise has been made between operator and passenger.

SEC. XVI. A vehicle not engaged shall not refuse to stop for a passenger who signals it plainly.

SEC. XVII. Public self-propelled vehicles when on public stands or underway shall display in English or Spanish a sign, 9 inches in length by 5 inches in width, affixed to the front of the vehicle behind the wind shield, which shall read on the one side "For Hire" in black 2-inch letters on white background and on the other side "Engaged," in white 2-inch letters on red background; sign to be affixed by swivel so that turning sign will denote status of vehicle. Sign to indicate at all times the exact status of the vehicle, whether engaged or unengaged.

SEC. XVIII. A copy of these regulations must be carried in every vehicle operating for hire and must be shown to passengers upon request. Upon application by the owners or licensees of such vehicle, The Panama Canal, or municipal authorities of Panama City or Colon, will furnish copies for this purpose.

A printed card showing hourly and zone fare rates must be carried prominently displayed inside each public vehicle, such cards to be furnished by The Panama Canal, or municipal authorities of Panama City or Colon.

SEC. XIX. Any person violating any provision of these regulations shall be punished as provided in Section 5 of the Act of Congress approved August 21, 1916,[1] entitled "An Act extending certain privileges of Canal employees," etc.

SEC. XX. The Executive Order dated January 12, 1918,[2] establishing maximum rates of fare and governing transportation of passengers for hire in the Canal Zone, and the Executive Order dated May 29, 1919,[3] amending Sections 5 and 6 of the Executive Order dated January 12, 1918, are hereby repealed effective on the date on which these regulations shall take effect.

SEC. XXI. This order shall take effect on such date as may be fixed by the Governor of The Panama Canal.

February 26, 1921.

By the President.

NEWTON D. BAKER,
Secretary of War.

[1] Published as Panama Canal Circular No. 600-24.

[2] Published as Panama Canal Circular No. 601-71.

[3] Published as Panama Canal Circular No. 601-92.

Acting Chief Hydrographer.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 13, 1921.

All concerned—Effective April 14, 1921, and during the absence on leave of Mr. R. Z. Kirkpatrick, Mr. George E. Matthew will be Acting Chief Hydrographer, in charge of the Section of Meteorology and Hydrography.

JAY J. MORROW,
Governor.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 561.

PORT OF CRISTOBAL—continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
April 12	Pastores	United Fruit Co.	New York via wayports.
April 12	Cristobal	Panama Railroad Steamship Line	Norfolk.
April 13	Metapan	United Fruit Co.	New Orleans via wayports.
April 13	Sixaola	United Fruit Co.	New York via Kingston.
April 13	Montevideo	Spanish Line	Barcelona via wayports.
April 14	Tivives	United Fruit Co.	Colombian ports.
April 15	Martinique	French Line	St. Nazaire and wayports.
April 16	Stuyvesant	Royal Netherlands W. I. Mail	Port Limon.
April 16	San Blas	United Fruit Co.	Port Limon.

*DEPARTURES.

Date.	Vessel.	Line.	For—
April 12	Solano	Pacific Mail Steamship Co.	Tampico.
April 13	Panama	Panama Railroad Steamship Line	New York.
April 13	Metapan	United Fruit Co.	New Orleans.
April 13	Pastores	United Fruit Co.	New York via Port Limon and Habana.
April 14	Tivives	United Fruit Co.	New York via Kingston.
April 14	Sixaola	United Fruit Co.	New York via Colombia and Kingston.
April 14	Abangarez	United Fruit Co.	New Orleans via Bocas del Toro and Habana.
April 14	Colon	Panama Railroad Steamship Line	New York via Haiti.
April 16	Cristobal	Panama Railroad Steamship Line	Norfolk.
April 16	Stuyvesant	Royal Netherlands W. I. Mail	Puerto Colombia.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—
April 12	Derblay	General Steamship Corp. (S. B.)	San Francisco.

Date.	Vessel.	Line.	For—
April 15	Derblay	General Steamship Corp. (S. B.)	Valparaiso.

*Other than ships passing through the Canal.

THE PANAMA CANAL RECORD

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A Statement of Commercial Traffic Through the Panama Canal From its Opening to Date.

Herewith is given a comparative statement of the commercial traffic passing through the Panama Canal from its opening on August 15, 1914, to March 31, 1921. In the instances where tonnage figures have been omitted, it is due to the incomplete records kept during the early years of Canal traffic.

	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		U.S. equiv.	P. C. net.	Reg. gross.	Reg. net.		
July, 1920	225	705,643	856,798	1,109,079	702,591	$842,312.05	886,814
August, 1920	266	782,415	951,345	1,208,471	770,320	936,209.44	1,040,740
September, 1920	256	832,742	1,008,785	1,293,470	817,810	1,010,150.63	1,009,557
October, 1920	238	762,013	935,579	1,190,936	754,549	911,825.58	991,066
November, 1920	238	765,817	929,875	1,184,072	756,223	933,912.11	984,910
December, 1920	265	832,407	1,027,918	1,298,864	823,758	1,007,849.32	1,076,539
January, 1921	279	894,689	1,094,323	1,383,778	883,362	1,095,857.46	1,177,053
February, 1921	241	763,925	916,838	1,179,979	752,022	917,412.49	952,904
March, 1921	255	924,309	1,112,818	1,417,220	917,441	1,105,536.55	1,084,563
First 9 months of fiscal year 1921	2,263	7,263,960	8,834,279	11,265,869	7,178,427	8,761,065.63	9,204,146
Fiscal year 1920	2,478	7,089,230	8,546,044	11,059,819	7,037,875	8,513,933.15	9,374,499
Fiscal year 1919	2,028	5,193,812	6,145,094	7,876,603	.....	6,172,828.59	6,946,540
Fiscal year 1918	2,068	5,440,114	6,584,073	9,371,339	.....	6,438,855.55	7,533,031
Fiscal year 1917	1,806	.....	5,817,607	8,530,821	.....	5,631,781.66	7,083,045
Fiscal year 1916[1]	760	.....	2,385,284	3,596,529	.....	2,393,830.42	3,063,371
Fiscal year 1915[2]	1,072	.....	3,772,167	5,416,787	.....	4,343,383.69	4,926,145

[1] Canal was closed to traffic from September 18, 1915, to April 15, 1916.
[2] Canal was opened to commercial traffic August 15, 1914.

Repairs to the Spanish Battleship "Espana."

The battleship *España* of the Spanish Navy conveying H. R. H. the Infante Don Fernando Maria de Baviera, arrived at Balboa, April 20, en route from Valparaiso to Spain via various ports arranged for in the Prince's itinerary for the voyage. The *España* sustained damages to her hull by stranding off the west coast of Chile on her southward passage. Temporary repairs were made, enabling the ship to make the return passage to Balboa.

The *España* passed through the Canal on her southward voyage on November 4. The ship was dry-docked at the Balboa shops on the 26th instant. Repairs will be begun immediately after the Mechanical Division has completed a survey of the vessel.

New West Coast Service.

The *New York Journal of Commerce* says that the General Steamship Corporation has begun a new service on the west coast of the Americas, with the steamship *Wallingford* scheduled to depart from San Francisco, April 21, with ports of call Mazatlan, Manzanillo, Salina Cruz, Champerico, San Jose de Guatemala, Acajutla, La Union, Corinto, Punta Arenas, Balboa, Buenaventura, and Guayaquil.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight April 23, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal[1]		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Kenuta	16	14.30	17	6.10	17	13.40	17	14.45	British	Pacific Steam Navigation Co.	401.0	52.0	19.6	London	Valparaiso	General	1,989	6,440	4,900
Fairfield City	16	17.14	17	6.26	17	14.56	17	15.55	American	U. S. Steel Products Co.	424.0	56.0	25.0	Mobile	Chinwang Tao	Steel	7,564	7,539	5,448
Gunner	17	1.05	17	9.35	17	16.25	18	15.20	British	C. O. Polkinghorne	130.0	23.5	13.1	Plymouth	Vancouver	Ballast		314	104
S. C. 285			18	8.30	18	13.44			American	United States Navy				Cristobal	Balboa				
Ceres	18	5.35	19	6.20	19	13.58	20	15.45	Dutch	Royal Netherlands W. I. Mail	340.0	48.0	14.6	Amsterdam	Valparaiso	General	668	4,243	3,123
Bantu	18	19.47	19	9.30	19	17.35	19	18.45	American	U. S. Steel Products Co.	360.0	47.0	26.7	New York	Vancouver	General	5,670	4,605	3,047
S. C. 287			19	6.45	19	14.35			American	United States Navy				Cristobal	Balboa				
S. C. 355			19	6.45	19	14.35			American	United States Navy				Cristobal	Balboa				
Santa Malta	20	6.35	20	7.05	20	14.41	20	15.50	American	Atlantic & Pacific S. S. Co.	401.6	53.9	23.6	New York	Talcahuano	General	4,859	6,766	4,809
Laura C. Hall[1]	18	16.38	20	9.43	20	19.25	22	8.27	British	Pacific Metals Corporation	81.0	25.6	11.0	Cristobal	Buenaventura	General	12	130	69
S. C. T. Dodd	20	10.35	20	11.00	20	19.35	20	20.43	American	Standard Oil Co.	426.0	57.0	28.0	Baton Rouge	San Francisco	Gasoline	8,500	7,451	4,928
Surrey	21	6.05	21	6.50	21	14.08	21	15.10	British	Federal Steam Navigation Co.	460.0	62.9	27.0	Liverpool	Auckland	General	4,270	10,000	7,285
Arcturus	21	6.10	21	7.35	21	15.07	21	19.30	American	Green Star Line (S. B.)	401.0	53.0	27.0	Baltimore	Vladivostok	General, steel	7,894	7,043	5,167
Keelung	21	6.55	21	12.53	21	20.40	21	21.45	British	Ellerman & Bucknall Line	400.0	52.0	27.0	New York	Adelaide	General	8,860	6,237	4,537
Steel Voyager	21	12.55	21	13.28	21	21.13	21	22.25	American	U. S. Steel Products Co.	395.5	55.0	28.3	New York	Seattle	Steel, general	8,600	7,285	5,256
Newport	19	13.55	22	6.10	22	13.25	22	16.43	American	Pacific Mail Steamship Co.	326.0	38.2	15.1	Cristobal	San Francisco	General	428	3,173	2,163
Taikai Maru	21	12.25	22	6.15	22	14.30	22	19.00	Japanese	Taiwanshcite Kabushiki Kaisha	360.0	50.0	23.8	Cienfuegos	Kobe	Sugar	5,145	4,097	2,859
West Sequana	21	21.55	22	6.35	22	15.28	22	16.25	American	Pacific Mail Steamship Co. (S. B.)	410.5	54.3	18.1	Savannah	San Francisco	Steel, general	4,896	6,567	4,909
Maricopa	22	10.26	22	10.52	22	18.30	22	20.45	Norwegian	W. Wilhelmsen	430.0	57.0	27.0	Port Lobos	Antofagasta	Fuel oil	9,500	6,996	5,108
North American	22	3.22	22	12.10	22	19.40	22	20.45	British	Amer. Metal Transportation Co.	251.0	43.6	22.6	New York	Valparaiso	Coal, general	3,100	2,444	1,571
Orion[2]	22	14.20	22	14.38	22	22.05	23	22.10	American	United States Navy	514.0	65.2	28.6	Norfolk	Los Angeles	Coal	10,600		
Rio Gatun[3]	21	17.47	22	12.30	22	14.18			Panaman	A. R. Eckhardt				Cristobal	Gatun Lake			8	8
Cauca	17	14.37	23	5.53	23	13.17	23	14.28	British	Pacific Steam Navigation Co.	246.0	35.2	14.6	Cristobal	Guayaquil	General	80	1,582	1,023
Barima	18	20.33	23	6.05	23	13.18	23	14.28	British	Pacific Steam Navigation Co.	220.5	37.5	11.6	Cristobal	Champerico	General	334	1,651	918
Anna E. Morse	23	8.25	23	8.55	23	16.16			American	U. S. Transport Co.	402.0	53.0	24.0	Mobile	Los Angeles	General	6,000	6,570	4,856
Snook[4]			23	6.00	23	16.10			American	W. R. Smith				Cristobal	Balboa	Ballast		2	1
Edward Luckenbach	23	9.40	23	12.30	23	19.05	23	19.58	American	Luckenbach Line	436.0	57.0		New York	San Francisco	Steel, general	5,600	8,543	6,427

[1] Motor schooner. [2] Collier. [3] Launch. [4] Launch, towing cayuco.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

K. I. Luckenbach	16	17.35	17	6.33	17	14.15	17	20.50	American	Luckenbach Line	446.0	56.1	25.0	Seattle	Philadelphia	General	5,000	8,555	6,204
Eastern Leader	16	22.45	17	7.50	17	15.43	17	20.40	American	Pacific Steamship Co. (S. B.)	344.8	50.1	22.5	Portland	Limerick	Wheat	5,455	4,347	3,122
Cauca	16	23.30	17	7.55	17	14.37	23	5.53	British	Pacific Steam Navigation Co.	246.0	35.2	13.0	Guayaquil	Cristobal	General	444	1,582	1,023
Ulysses	14	19.25	17	8.45	17	16.02	17	16.02	American	United States Government	514.0	62.2	.....	Balboa	Norfolk	Ballast	.....	11,519	6,930
Hororata	17	3.10	17	10.46	17	20.05	18	12.06	British	New Zealand Shipping Co.	511.1	64.2	27.0	Sydney	London	(8)	6,979	12,622	8,598
Kayseeka	17	9.09	17	10.49	17	17.58	17	21.06	American	Thorndyke & Trenholme (S.B.)	400.7	54.2	24.4	Portland	Naples	Wheat	7,298	6,529	4,712
Laura C. Hall	17	8.15	18	6.21	18	16.38	20	9.43	British	Pacific Metals Transportation	81.0	25.6	9.6	Buenaventura	Cristobal	Specie	.....	131	69
Montebello	16	9.25	18	6.51	18	13.50	18	1.50	American	Union Oil Co.	440.4	58.2	.....	San Francisco	Port Lobos	Ballast	.....	8,585	5,853
Elzasier	17	23.30	18	8.20	18	18.15	19	17.35	British	Lloyd Royal Belge	400.3	52.3	24.0	Caleta Colosa	Brest[7]	Nitrate, borax	7,010	6,091	4,457
Jamaica	18	10.45	18	12.18	18	19.27	19	18.10	British	Pacific Steam Navigation Co.	220.0	34.0	12.0	Tumaco	Pto. Colombia	General	347	1,187	622
Barima	18	11.00	18	13.49	18	20.33	23	6.05	British	Pacific Steam Navigation Co.	220.5	37.5	12.6	Champerico	Cristobal	General	571	1,650	918
Newport	18	10.30	19	6.26	19	13.55	22	6.10	American	Pacific Mail Steamship Co.	326.0	38.2	19.6	San Francisco	Cristobal	General	1,243	3,173	2,163
Kumara	18	18.00	19	6.35	19	16.20	19	22.55	British	Shaw, Savill, & Albion Co.	425.0	54.2	24.4	Wellington	London	(8)	4,400	7,449	5,414
R-25[5]	11	17.21	19	7.19	19	15.52	.....	.....	American	United States Navy	175.0	16.0	.....	Balboa	Cristobal	.....	.....	.....	.....
Sciota[6]	3-19	17.00	19	7.32	19	15.52	.....	.....	American	United States Navy	149.3	30.0	.....	Balboa	Cristobal	.....	.....	.....	.....
Gen. G. W. Getty[6]	14	20.10	19	13.00	19	14.37	.....	.....	American	United States Army	98.0	22.0	.....	Balboa	Pedro Miguel	.....	.....	.....	.....
Brush	19	2.30	20	6.25	20	15.27	20	15.27	American	N. Atl. & Western S. S. Co.	390.0	54.2	18.6	Seattle	Boston	General	2,263	6,161	4,433
Trontolite	19	18.15	20	7.35	20	16.14	20	17.55	American	Standard Oil Co.	419.4	57.2	18.1	Vancouver	Tampico	Ballast	.....	7,345	5,429
Ardover	20	6.00	20	8.13	20	17.30	20	19.30	British	David Steamship Corp.	483.5	62.7	28.0	Tocopilla	Rotterdam	Nitrate	10,633	9,614	6,525
Peru	15	19.20	20	9.00	20	18.00	.....	.....	British	Pacific Steam Navigation Co.	350.0	43.1	16.0	Valparaiso	Cristobal	General	156	4,094	2,655
Willpolo	20	9.23	20	14.16	20	23.00	20	23.00	American	Williams Steamship Co.	386.8	52.2	25.5	San Francisco	New York	Lumber, general	6,570	5,680	4,112
S. C. 287	19	14.35	20	14.35	20	22.50	.....	.....	American	United States Navy	110.0	16.0	.....	Balboa	Cristobal	.....	.....	.....	.....
O-15[5]	3-17	18.47	21	7.46	21	17.47	.....	.....	American	United States Navy	175.0	16.4	13.1	Balboa	Cristobal	.....	.....	.....	.....
O-12[5]	3-17	18.45	21	7.52	21	17.47	.....	.....	American	United States Navy	175.0	16.4	13.1	Balboa	Cristobal	.....	.....	.....	.....
O-13[5]	3-21	15.05	21	7.55	21	17.47	.....	.....	American	United States Navy	175.0	16.4	13.1	Balboa	Cristobal	.....	.....	.....	.....
Freeport Sulphur No. 5	21	3.00	21	8.40	21	18.00	21	18.00	American	Freeport Sulphur Transp. Co.	355.5	52.5	21.0	Tacoma	Poughkeepsie	Lumber	3,970	4,940	3,316
Rio Gatun[3]	.....	.....	21	16.00	21	18.00	22	12.30	Panaman	A. R. Eckhardt	31.4	8.0	.....	Gatun	Colon	.....	.....	.....	.....
Duns Law	22	2.00	22	7.54	22	18.59	22	20.50	British	Thos. Law of Glasgow	340.0	50.1	11.0	Valparaiso	Hampton Rds.	Ballast	.....	4,940	3,316
Afrika	22	7.10	22	8.10	22	20.12	22	22.10	Danish	East Asiatic Steamship Co.	445.8	60.3	30.0	Melbourne	Copenhagen	Wheat, copra	9,000	9,335	6,874
Vikingstar	22	11.30	22	12.26	22	22.05	23	1.10	British	Blue Star Line, Ltd.	400.4	52.3	23.0	Wellington	Falmouth[7]	(9)	3,601	6,870	6,408
Port Melbourne	23	4.00	23	7.46	23	16.55	23	20.20	British	Commonwealth and Dom. Line	501.3	63.3	27.1	Sydney	London	(8)	7,600	11,860	9,065
Pacific	22	8.00	23	8.00	23	18.57	23	19.59	Swedish	Johnson Line	362.0	51.3	26.7	Tacoma	Dublin	(10)	6,000	5,360	4,039
K. R. Kingsbury	23	12.50	23	13.24	23	21.34	24	4.10	American	Standard Oil Co.	440.0	58.2	30.0	San Francisco	London	Lubricating oil	11,000	.....	.....
Nishmaha	20	23.00	23	14.40	23	23.35	24	22.53	American	U. S. & S. A. Lines (S. B.)	401.4	53.2	23.0	Australia	New York	(11)	5,420	6,611	4,774

[5] Submarine. [6] Tug. [7] For orders. [8] Cold storage and general. [9] Frozen beef and mutton. [10] Flour, coffee, and general. [11] Chrome ore and general.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
April 17	Turrialba	United Fruit Co.	New Orleans and way-ports.
April 18	Gen. W. C. Gorgas	Panama Railroad Steamship Line	New York via Haiti.

*DEPARTURES.

Date.	Vessel.	Line.	For—
April 17	San Blas	United Fruit Co.	Boston.
April 17	Turrialba	United Fruit Co.	Bocas del Toro.
April 19	Martinique	French Line	Puerto Colombia.

(Continued on page 579, column 2.)

German Service to West Coast of South America.

The German steamship *Murla*, of the Roland Line, passing through the Canal on April 8, was the first vessel to make the transit in the combined Roland Line and Kosmos Line regular service between Germany and the west coast of South America. Announcement of this service was published in THE PANAMA CANAL RECORD of February 23. The *Murla* is a ship of 2,188 gross and 1,361 net tons, Panama Canal measurement, 269 feet long by 42 feet beam. She was carrying 1,600 tons of cargo at time of passage, and was destined to Corral.

The steamer *Targis* was scheduled to sail from Hamburg on April 2, as the second vessel in the service.

This is the first regular German service through the Canal.

Sale of Vessels by the Navy.

The United States Navy announces that it will sell the steam yacht *Nokomis* of 872 gross tons; the motor patrol boat *Herreshoff*, 83 feet 4 inches long, and the motor patrol boat *Eaglet*, 87 feet, 9 inches long; the competitive bids to be opened at 12 o'clock, noon, May 3, 1921, at the Navy Department, Washington, D. C. The first two boats may be seen at Brooklyn, N. Y., and the *Eaglet* at Boston, Mass.

Solid Cargo of Wool.

The steamship *Baarn*, which passed through the Canal on April 16, carried a solid cargo of wool from Punta Arenas, at the Strait of Magellan, to Boston. It amounted to 15,462 bales or 3,700 tons.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending April 23, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Kenuta	Pacific Steam Navigation Co		April 17		20½
Cauca	Pacific Steam Navigation Co	April 17	April 23	441	114
Ceres	Royal Netherlands W. I. Mail	April 18	April 19	70	40
Martinique	French Line		April 19		190
Jamaica	Pacific Steam Navigation Co	April 18	April 19	315	10
Laura C. Hall	Pacific Metals Corporation	April 18	April 20	[1] 222	12
Parismina	United Fruit Co	April 18	April 21	931	213
Gen. W. C. Gorgas	Panama Railroad Steamship Line	April 18	April 21	2,063	3
Barima	Pacific Steam Navigation Co	April 18	April 23	571	332
Ulua	United Fruit Co	April 19	April 20	202	98
Newport	Pacific Mail Steamship Co	April 19	April 22	1,222	510
Santa Marta	United Fruit Co	April 20	April 21	95	45
Camden	United Fruit Co	April 20	April 22	9,197	([2])
Turrialba	United Fruit Co	April 20	April 20	1	½
Coronado	Elders & Fyffes Ltd	April 20	April 20	½	2
Peru	Pacific Steam Navigation Co	April 20		140	
Alianca	Panama Railroad Steamship Line	April 23		1,670	
San Bruno	United Fruit Co	April 23	April 23	45	([2])

[1] Pounds. [2] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending April 23, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Laura C. Hall	Pacific Metals Corporation	April 17	April 18	1½	
Cauca	Pacific Steam Navigation Co	April 17	April 18	3½	
Newport	Pacific Mail Steamship Co	April 18	April 18	418	
Brush	North Atlantic & Western S. S. Co	April 18	April 18	265	
Newport	Pacific Mail Steamship Co	April 22	April 22		1
Aysen	C. S. A. de V	April 23		219	

Coal Prices at Various Ports.

By courtesy of the Berwind-White Coal Mining Company the following prices for steam coal at various ports on April 1, 1921, are published:

Bunker Coal Prices, April 1, 1921.

WEST INDIES.	
Barbados [1]	90/0
St. Lucia [1]	90/0
Trinidad [1]	89/0
St. Thomas [1]	89/0
Habana [1]	$13.85
San Juan [1]	17.50
Bermuda [1]	15.00
Santiago [1]	20.00
Cienfuegos [1]	15.00
Vera Cruz [1]	20.00
Kingston [2]	102/6
SOUTH AMERICA.	
Bahia [2]	107/6
Bahia Blanca [2]	104/0
Buenos Aires [2]	100/0
La Plata [2]	100/0
Montevideo [2]	100/0
Pernambuco [2]	107/6
Rio de Janeiro [2]	100/0
Rosario [2]	102/6
Santos [2]	102/6
Coronel	75/0
UNITED KINGDOM.	
Dartmouth [2]	62/6
Portland [2]	62/6
Falmouth [2]	62/6
Glasgow:	
1st [2]	47/0
2d [2]	42/0
Liverpool [2]	45/0
Hull [2]	48/0
Newcastle [2]	40/0
West Hartlepool	45/0
Middlesbrough	38/6
Plymouth	65/0
London [1]	64/0
Southampton [1]	75/0
Avonmouth [1]	63/0
Cardiff [2]	45/0
Newport [2]	45/0
Leith [2]	50/0
Sunderland [2]	40/0
EUROPE.	
Constantinople:	
American	100/0
Turkish	60/0
Gibraltar	60/0
Genoa	87/6
Naples	90/0
Hamburg:	
United States steamers	$35.00
British steamers	£10–3–6
Huelva	77/6
Lisbon	100/0
Palermo	175/0
Vigo	75/0
Valencia	190/0
Bilbao	75/0
Barcelona	80/0
Marseilles	Frcs. 200
Antwerp	75/0
Alicante	220/0
Brindisi	Lire 430
Corcubion	180/0
Copenhagen	£10–5–0
Corunna	75/0
Carthagena	200/0
Gothenburg	Kr. 200
Rouen	Frcs. 475
Santander	185/0
EUROPE—continued.	
Rotterdam [2]	Fl. 24
Amsterdam [2]	Fl. 24
Hook of Holland [2]	Fl. 24
Bergen	Kr. 190
AZORES.	
Fayal [1]	85/0
Ponta Delgada [1]	85/0
ATLANTIC ISLANDS.	
St. Vincent [3]	77/6
Madeira [3]	80/0
Las Palmas [3]	75/0
Teneriffe [3]	75/0
AFRICA.	
Aden:	
American	140/0
Welsh	200/0
Native	100/0
Algiers [2]	65/0
Dakar [2]	77/6
Oran [2]	65/0
Capetown [2]	61/3
Delagoa Bay	51/0
Alexandria	126/6
Freetown	175/0
Natal	70/0
Port Said	84/0
Suez	121/6
Perim	100/0
ASIA.	
Calcutta	Rs. 21
Karachi	Rs. 44
Rangoon	Rs. 40
UNITED STATES.	
Pensacola [4] (Pratt, Black Creek.)	$7.00
Pensacola (Run-of-mine.)	6.50
New York [3]	8.15
Philadelphia [1]	8.40
Boston [1]	10.75
Baltimore [1]	8.30
Newport News [2]	7.25
Norfolk [2]	7.25
Charleston [1]	9.00
New Orleans (Pratt) [1]	7.95
Mobile:	
Pratt, Black Creek [4]	7.00
Run-of-mine [4]	6.50
Galveston (net ton) [1]	12.00
Jacksonville [1]	11.00
Savannah [5]	9.00
Brunswick [1]	11.50
Fernandina [5]	10.75
Key West [1]	17.00
Gulfport	$7.50 to $8.00
Wilmington	14.00
Vancouver	8.75
Seattle [3]	10.45
Tacoma [3]	10.45
THE PANAMA CANAL.	
(See details on page 574.)	
Cristobal [1]	$12.00
Balboa [1]	14.00

[1] Trimmed. [2] F. O. B. [3] F. A. S. [4] Over hoist. [5] Under chutes.

CANADA.

Halifax [1]	$13.00
St. John's, N. S. [1]	13.00
Montreal	8.70
Louisburg, C. B	10.25
North Sydney, C. B	14.25
Sydney, C. B	10.25
Quebec	8.70

AUSTRALIA.

Newcastle, N. S. W	14/9 to 16/9
Sydney, N. S. W	28/5

CHINA AND JAPAN.

Hongkong	87/0 to 97/0
Shanghai	75/0 to 86/0
Chingwangtao	46/0 to 63/0
Kobe	Yen 25.90 to 27.50
Moji	Yen 26.15
Otaru	Yen 22.15 to 27.15
Wakamatsu	Yen 25.65
Ymuiden	Yen 33.65 to 36.65
Singapore (Malay Peninsular)	107/9
Pula Laut (Borneo)	Fl. 35
Colombo [2]	75/0
Malta [2]	75/0
Honolulu (American coal)	$19.35

[1] Trimmed. [2] F. O. B.

COAL PRICES AT THE CANAL.

	Colon and Cristobal.	Balboa.
1. To steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 2	$12.00	$14.00
2. To vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, and quantity available, or for the purpose of expediting transit		$12.00
3. To steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds	$13.00	15.00
4. To steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 3, per ton of 2,240 pounds	14.00	16.00
5. When request is made by commander of vessel, chief engineer, or agent, for trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, an additional charge of 90 cents per ton will be made for extra handling.		
6. For lump coal for galley use, delivered in sacks, additional charge per ton, $10. Should the vessel furnish satisfactory sacks, the price will be only $3 per ton additional. Not more than 5 tons will be supplied to a vessel.		
7. For coal for cargo, delivered only by special authority of the Governor, per ton of 2,240 pounds	14.00	16.00

Tobacco.

A shipment of 800 tons of tobacco from Newport News to Australia, was one item in the cargo of the *City of Auckland*, which passed through the Canal on April 2.

Glass.

The steamship *West Kedron*, from Hamburg to Pacific ports of the United States, passed through the Canal on April 4, carrying in its cargo 2,975 tons of window glass from Antwerp to Pacific ports and 4,170 tons of glass sand, from Antwerp to Oakland.

Sugar.

A bulk cargo of sugar amounting to 9,000 tons went through the Canal on April 5 on the *Ypres Maru*, bound from Cuba to Yokohama, Japan. A cargo of 5,780 tons from Cuba, bound to Sydney, Australia, passed through the Canal on April 3 on the steamship *Australglen*.

Sulphur.

Bulk cargoes of sulphur handled through the Canal during the past three weeks are 3,100 tons on the steamship *Anson S. Brooks*, April 7, 1921, from Galveston to Portland; 1,250 tons on the steamship *Tregarthen*, April 11, from Sabine, Tex., to Wallaroo; and 6,600 tons on the steamship *Tredinnick* from Sabine to Melbourne.

Butter and Cheese from New Zealand.

Ships from New Zealand that have passed through the Canal during the month of April have carried large consignments of beef, mutton, and dairy products in cold storage to London. Among the items are 3,344 tons and 58,568 cases of butter. The cheese shipments have amounted to 3,940 tons and 11,160 crates.

Large Shipment of Fuel Oil.

The steamship *San Fernando*, which passed through the Canal on April 9, carried a cargo of 16,117 tons of fuel oil from Tampico, bound for Singapore, by way of Honolulu. She also carried bunkers of 2,090 tons, making a total of 18,207 tons of oil. The net tonnage of this ship is only 8,335.44 tons.

Tons of Canary Seed.

The steamship *Rotarian*, which passed through the Canal on April 7, carried a general cargo of 6,032 tons, among which was 175 tons of canary seed. This seed was shipped at Buenos Aires and is to be discharged at Los Angeles, San Francisco, and Portland.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended April 23:

Launch *Vacuum, Jr.*, repairing damaged bow; renewing floor and hatch covers and reinstalling engine; U. S. submarines *O–12*, *O–13*, *O–15*, periodical overhaul, including docking, cleaning, and painting bottoms and inside superstructure; renewing deteriorated plates and frames in superstructure and repacking stern glands; overhauling sea valves and trimming systems; cleaning and coating tanks; miscellaneous small items of adjustment and repairs to machinery; barge *No. 137*, docking, staging, cleaning, and painting bottom; cleaning and painting inside and out; renewing hopper sheathing and strongback sheathing, and rebuilding strongbacks and A–frames; overhauling operating gear; barge *No. 201*, renewing plates, fenders, and deck on one corner where damaged; rebuilding stanchions and roof; launch *Coco Solo*, renew stem, repair monkey rails, and repair copper sheathing; tug *Favorite*, renewing section of stem and installing new sections of plate in three top strakes where damaged by collision; U. S. submarine *R–25*, dock, clean, and paint bottom; test and repair fuel and ballast tanks; overhaul sea valves; tug *Gorgona*, dock, clean, and paint bottom; electric-weld propeller, straighten rudder stock, overhaul sea valves, overhaul fire pump, install new general service pump, renew water end on sanitary pump, overhaul galley smoke pipe; steamships *Circassian Prince*, docking, cleaning, and painting bottom; overhauling sea valves, installing 4 doublers on bow, overhauling pistons and valves on main engine, and overhauling 4 direct-connected pumps on main engine; overhauling fire system on deck; *Tregantle*, docking, cleaning, and painting bottom; renewing stem and 9 frames port and starboard; repairing and renewing plates back to No. 10 frame to upper 'tween deck level; repairing 1 broken anchor and overhauling anchor cables; repairing cracked hawse pipes, all the above being result of collision at sea; *Ulysses*, cleaning fire side of boilers, renewing 2 staybolts in boilers; scaling and painting top sides; *Kiyo Maru*, docking, cleaning, and painting bottom; overhauling sea valves, cementing up propeller hub, testing cargo tanks and making all tight; removing fumigating and sanitary system in 'tween decks, cleaning and wire-brushing cargo tanks; subchaser *No. 355*, docking, cleaning bottom, patching copper, and recalking where leaking; steamship *Nishmaha*, renewing high pressure piston rings, cleaning out groove in bull ring, and refitting piston rod packing; Spanish cruiser *España*, docking, cleaning, and painting bottom; repairing hull forward where damaged through grounding; miscellaneous minor repairs to hull and engineer's departments, consisting of repairs to drains and vent and sounding pipes in engine rooms; overhauling various pumps, renewing suction and discharge lines to circulators, repairing ash hoist trunk, renewing discharge pipes on ash ejectors, manufacturing evaporator coils, manufacturing 1 boat boom, repairing and reriveting torpedo net platform and renewing miscellaneous pads and ring bolts on deck; examining rudder, overhauling sea valves and zincs on hull; sub-

chaser *No. 285*, docking, cleaning bottom, patching copper, calking leaks in bottom and recalking deck; steamship *Peru*, docking, cleaning and painting bottom; drawing tail shafts for inspection, shipping spare starboard tail shaft, overhauling sea valves, overhauling cargo hatch strongback and chafing irons on coamings; patching and stiffening up bulwarks in wake of two cargo port doors; overhauling accommodation ladder; speed boat (U. S. Navy), realign tail shaft; tug *Miraflores*, docking, cleaning, and painting bottom, repairing fenders and rail.

The following vessels were at the Cristobal shops for repairs during the week ended April 25:

Steamships *General W. C. Gorgas*, *Advance*, and *Alliance*, miscellaneous repairs and painting to engine, deck, and steward departments; U. S. submarine *O-14*, renew battery and hull ventilation ducts, make and install new anchor shaft, etc.; steamship *Manàvi*, rebore steam end of Weir's pump, dry dock, clean and paint; manufacture and install new funnel, etc.; tanker *Doewa*, alter crew accommodations, manufacture, fit, and install steel water-tight doors as per plan furnished; examine and repair gravity tank valves, etc.; steamship *Mantaro*, furnish foreman and 15 men to clean bilges and tank top in fireroom, etc.; tanker *Anam*, clean and paint bottom; clean pistons and rings of main engines; examine same and renew as necessary; true up main bearings, etc.; motorship *Laura C. Hall*, tap out hole in inboard side of starboard engines, etc.; steamships *Forse*; renew 9 staybolts in combustion chamber; renew brass valve stem, etc.; *Steel Mariner*, U. S. A. T. *St. Mihiel*, steamships *Peru*, *Caribbean*, *Montevidio*, *Santa Marta*, dredge *No. 86*, tug *Tavernilla*, and launch *Hibiscus*, minor repairs.

Special Cable Rates for Employees.

The All-America Cables has decided to grant employees of the Canal Zone and their immediate families, upon employee presenting either his metal check or a letter from some Canal Zone official identifying him as an employee of the Canal, the reduced rate of 50 per cent of the commercial tariff rate to all points in Central and South America over its lines, provided the messages are in connection with matters of a purely social or personal nature, and with the understanding that reduced rate is only to points where its cable touches and that to points beyond the rate will be 50 per cent of the commercial rate over its lines, plus the total rate beyond its lines.

Taboga Launch Schedule Effective May 1, 1921.

	A. M.
From dock No. 19, Balboa, every day, including Sundays and holidays...	10.30
	P. M.
Saturdays and days preceding holidays	5.00
From Taboga:	P. M.
Week days	12.30
Sundays and holidays	6.30

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z. (telephone 286):

Entomological laboratory assistant, $1,080 to $1,440 a year (male and female); form 1312; announcement No. 201; age, 18 but not 55 years; vacancies exist in the Bureau of Entomology, Department of Agriculture, Washington, D. C.; May 11–12, 1921.

Assistant observer, Weather Bureau, $1,080 a year (male and female); form 304; announcement No. 198; age, 18 but not 35 years; vacancies exist in the Weather Bureau; May 11, June 22, and August 3, 1921.

Assistant examiner, Patent Office, $1,500 a year (male and female); form 1312; announcement No. 197; age, 20 but not 55 years; vacancies exist in the Patent Office, Washington, D. C.; May 11–13, 1921.

Chemist, $3,000 to $5,000 a year; associate chemist, $2,000 to $3,000 a year; junior chemist, $1,400 to $2,000 a year (male and female); forms 2118 and 1312; announcement No. 194; age, within reasonable age limits; vacancies exist in the Chemical Warfare Service, Edgewood Arsenal, Edgewood, Md.

Clerk-draftsman, $1,500 a year (male and female); form 304; age, 18 but not 55 years; vacancies exist in the General Land Office, Washington, D. C.; May 25, 1921.

Druggist, $1,800 to $2,000 a year (male and female); form 1312; announcement No. 193; age, within reasonable age limits; vacancies exist in the Public Health Service; May 11, 1921.

Engineer, $2,400 a year (male and female); No. 114-supplemental; sufficient applications received, closing date April 15, 1921.

Dietitian, Public Health Service; No. 163-amendment; subjects of neutral countries may compete; closing date, June 30, 1921.

Junior mechanical engineer, $1,500 to $1,800 a year; mechanical engineer (internal combustion), $3,000 a year; mechanical engineer (designing), $3,000 a year (male and female); form 2118; age, below 55 years; vacancies exist under the National Advisory Committee for Aeronautics, Langley Field, Va.; May 24, 1921.[2]

Shop apprentice, $720 a year (male and female); form 1312; announcement No. 191; age, 16 but not 18 years; vacancies exist in the Bureau of Standards, Department of Commerce, Washington, D. C.

Assistant engineer, $1,800 to $2,340 a year; junior engineer, $1,440 to $1,740 a year (male and female); form 1312; announcement No. 114-amended; age, 25 but not 55 years; vacancies exist in the Water Resources Branch of the Geological Survey; July 1, 1921.[2]

Automobile mechanic's helper; 41 cents per hour (male and female); form 1800; announcement No. 199; age, 18 but not 50 years; vacancies exist in the Bureau of Mines, Department of the Interior, Washington, D. C.; May 10, 1921.[2]

Domestic science teacher; $760 to $840 a year (male and female); announcement No. 213; age, 22 but not 50 years; form 1312; vacancies exist in Indian Service; May 25, July 6, and August 17, 1921.

Electrical engineer; $2,400 to $3,600 a year; assistant electrical engineer, $2,000 to $2,400 a year; electrical assistant, $1,500 to $2,000 a year (male and female); form 2118; age, within reasonable age limits; vacancies exist in the Signal Service at large, Washington, D. C.; May 24, 1921.[2]

Instructor, aircraft armament, $2,700 a year; instructor, small arms, $1,800 to $2,400 a year (male and female); form 2118; age, 21 but not 55 years; vacancies exist in the Ordnance Department at large; May 31, 1921.[2]

Instrument man, $5.20 to $8.40 per diem (male and female); form 1312; announcement No. 693-amended; age, 22 but not 55 years; vacancies exist in the Navy Yard Service; August 1, 1921.

Irrigation engineer, $2,400 or over a year; civil engineer, $2,400 or over a year; assistant irrigation engineer, $1,500 to $2,280 a year; assistant civil engineer, $1,500 to $2,280 a year; junior irrigation engineer, $1,200 to $1,440 a year; junior civil engineer, $1,200 to $1,440 a year; engineering draftsman, $1,200 to $2,400 a year (male and female); form 1312; age, within reasonable age limits; vacancies exist in the Reclamation Service; August 1, 1921.[2]

Junior technologist, $1,200 to $1,500 a year (male and female); form 1312; announcement No. 200; age, within reasonable age limits; vacancies exist in the Bureau of Standards, Department of Commerce, Washington, D. C.; May 10, 1921.[2]

Librarian, $3,000 a year (male and female); form 2118; announcement No. 216; age, below 55 years; vacancy at United States Military Academy, West Point, N. Y.; May 17, 1921.[2]

Mechanical draftsman, $1,000 a year (male and female); form 1312; announcement No. 214; age, 18 but not 55 years; vacancies exist in the Patent Office, Department of the Interior, Washington, D. C.; May 17, 1921.[2]

Metal working pressman, $5.42 per diem (male and female); form 1800; announcement No. 210; age, 20 but not 50 years; vacancies exist in the equipment shops of the Post Office Department, Washington, D. C.; May 17, 1921.[2]

Observer and computer in gas analyses, $1,320 to $1,620 a year (male and female); form 1312; age, below 30 years; vacancies exist in the Bureau of Mines, Department of the Interior, Pittsburgh, Pa.; May 25, 1921.

Scientific assistant in marketing, $1,320 to $2,100 a year (male and female); form 1312; announcement No. 272; age, 20 years and over; vacancies exist in the Bureau of Markets, Department of Agriculture, Washington, D. C.; June 23, June 24, 1921.

Special agent, $1,500 to $2,250, Grade I; $2,500 to $3,000, Grade 2 (male and female); form 1312; age, 25 but not 45 years; vacancies exist in the Bureau of Internal Revenue, Treasury Department; August 1, 1921.[2]

Statistical clerk, $900 to $1,400 a year; junior statistician, $1,200 to $1,800 a year (male and female); form 1312; age, 18 but not 55 years; vacancies exist in the Departmental Service; Washington, D. C.; May 25 and July 6, 1921.

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[1] Nonassembled. Applications will be received at any time until further notice.

[2] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Official Circulars.

Appointment.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 23, 1921.

CIRCULAR No. 661-96:

Mr. Hubert H. Hammer is appointed Surveying Officer, The Panama Canal, effective April 23, 1921, *vice* Mr. Frederick H. Stephens, deceased.

JAY J. MORROW, *Governor.*

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 13, 1921.

CIRCULAR No. 289:

Effective April 11, 1921, Mr. S. W. Heald is designated an accountable official of The Panama Canal, *vice* Mr. W. F. Foster, and as such will account for all nonexpendable property in use by the Superintendent, Panama Railroad and by Panama Canal transportation.

ELWYN GREENE,
Acting Auditor, The Panama Canal.

Approved:
JAY J. MORROW, *Governor.*

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 14, 1921.

CIRCULAR No. 290:

Effective April 13, 1921, Mr. Geo. E. Matthew is designated an accountable official of The Panama Canal, *vice* Mr. R. Z. Kirkpatrick, and as such will account for all nonexpendable property in use by the Division of Meteorology and Hydrography.

ELWYN GREENE,
Acting Auditor, The Panama Canal.

Approved:
JAY J. MORROW, *Governor.*

Acting Master of Transportation.

PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., April 16, 1921.

All concerned—Effective April 15, 1921, and during the absence on leave of Mr. W. F. Foster, Mr. W. J. Bissell will act as Master of Transportation for the Panama Railroad Company.

S. W. HEALD,
Superintendent.

Approved:
JAY J. MORROW,
President.

Acting Superintendent, Division of Municipal Engineering.

THE PANAMA CANAL,
DEPT. OF OPERATION AND MAINTENANCE,
MUNICIPAL ENGINEERING DIVISION,
BALBOA HEIGHTS, C. Z., April 13, 1921.

All concerned—During the period Mr. A. C. Miller is on leave of absence, Mr. D. W. Norton will act as Superintendent of the Northern District, Municipal Engineering Division.

Effective, April 14, 1921.

G. W. GREEN,
Acting Municipal Engineer.

Inspection Calls.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 24, 1915.

CIRCULAR No. 90 (Reissue):

To all concerned—Effective at once, inspectors signing inspection calls for equipment, the price of which includes nonexpendable tools or other accessories, will list these on both the original and duplicate calls, or attach a list thereof to the calls. Full description of such items and estimated value for each item, where actual values are not obtainable, must be furnished. The price at which equipment of this character will be taken into account will be that shown on the call, less the value of such tools or accessories included in the purchase price.

H. A. A. SMITH,
Auditor, The Panama Canal.

April 18, 1921.

It is noted that the above instructions are not being complied with. They will be strictly enforced in the future.

A complete description of all nonexpendable property received will be added to the call when the information shown thereon is not sufficient for identification.

ELWYN GREENE,
Acting Auditor, The Panama Canal.

Use of Track Speeders.

PANAMA RAILROAD COMPANY,
OFFICE OF MASTER OF TRANSPORTATION,
BALBOA HEIGHTS, C. Z., April 19, 1921.

IRCULAR No. 1788:

To heads of departments and divisions—It is the practice for some of the operators of track speeders to trail our trains to within a few feet of the rear end. This is not only annoying to passengers riding in parlor car, but is a very dangerous practice, as speeder would be unable to stop if for some reason train should be brought to a standstill by the bursting of an air hose or the air being applied in emergency.

I quote for your information Rules 5 and 6 of "Rules Governing the Operation of Speeders Over the Tracks of the Panama Railroad:"

5. Speeders must not follow a moving train closer than 600 feet.

6. Speeders must not follow each other closer than 500 feet.

Please bring this matter to the attention of operators of track speeders under your jurisdiction and inform them that this dangerous practice must be discontinued at once, as any future infraction of the rules governing the operation of speeders, as referred to herein, will result in the cancellation of permits to operate.

W. J. BISSELL,
Acting Master of Transportation.

Prices of Scrap.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 12, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective April 15, 1921, the following prices will be allowed by the Supply Department for scrap turned in by the various departments and divisions of The Panama Canal. The selling prices to departments and divisions, employees, and to individuals and companies are also indicated:

Kind of scrap.	Credit to be allowed divisions.	Issue and sale prices.	
		To departments of The Panama Canal.	To employees and individuals and companies.
	Short ton.	*Short ton.*	*Short ton.*
Cast iron, including car wheels	$6.00	$7.00	$30.00
Miscellaneous wrought iron and steel	3.00	4.00	30.00
Rail, scrap, grade No. 4	3.00	4.00	30.00
Rail, relaying, grade No. 2	20.00	21.00	(1)
Rail, relaying, grade No. 3	11.00	12.00	(1)
	Cwt.	*Cwt.*	*Cwt.*
Aluminum	8.00	9.00	25.00
Babbitt	2.00	3.00	15.00
Bags and burlap	.50	1.00	.....
Brass, mixed	4.00	5.00	15.00
Brass borings and turnings	4.00	5.00	15.00
Bronze, screening	4.00	5.00	15.00
Canvas	.50	1.00	.....
Copper, mixed	8.00	9.00	20.00
Cork	1.00	2.00	10.00
Hose	.50	1.00	6.00
Lead	1.00	2.00	5.00
Leather	.50	1.00	5.00
Pewter	10.00	11.00	50.00
Rags	.50	1.00	5.00
Rope	.50	1.00	5.00
Rubber	.50	1.00	6.00
Tool steel	5.00	6.00	25.00
Zinc	1.00	2.00	5.00

[1] None to be sold.

ROY R. WATSON,
Acting Chief Quartermaster.

Shipping Commissioner's Sale.

The Shipping Commissioner, room 305, Administration Building, Balboa Heights, C. Z., will accept written bids up to noon May 9, 1921, for the purchase of the personal effects belonging to the estate of Martin Johnson, deceased American seaman. Prospective bidders desiring to examine the effects should apply to the Shipping Commissioner's office, Balboa Heights, on any business day.

Sale of Lumber.

The Panama Canal has on hand at Balboa storehouse considerable quantities of 1″ x 6″, 1″ x 8″, and 1″ x 10″ dressed lumber, Douglas fir, grade 1, select common. Further information will be furnished by General Storekeeper, Balboa, or at office of Chief Quartermaster, Balboa Heights.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., April 16, 1921.

Insufficiently addressed mail matter for the following has been received in the office of the Director of Posts and may be obtained upon request of the addressees. Requests for forwarding may be made by telephone, calling No. 182, Balboa:

Adler, Lawrence
Allen, Charles H.
Allen, Edith P., Box 67
Anderton, Mrs. Rae V.
Bibbins, A. S., Box 477
Blake, Mrs. Joseph
Bonner, Walter
Bouchard, A. E.
Brittain, Jos.
Brown, Luther, Box 627
Buckholdt, J. A.
Burnett, Mrs. H., Box 356.
Burns, Frank
Butz, Gerald R.
Byerling, Selma
Cavanaugh, F., Box 374
Chambers, Herbert
Colyer, Mrs. Box 26,
Dagley, Mrs. F., Box 237.
Etchberger, T. N.
Felts, Mrs. A. B., Box 515.
Foreman, Mrs. Alice
Foulk, Evan
Geddes, G., Box 699.
Gribble, Nellie, Box 108.
Herman, Mrs. Geo., Box 127.
Hinkle, Mrs. Alicia
Hoskens, Luther
Huggins, H. A., Box 111.
Johnson, Joel N.
Johnson, Mrs. R. F.
Kelley, R. P.
Klemmer, J. A.
Kelley, Wm. O.
Lawrence, S. W.
Levine, Thomas
McLennan, Roderick
Miller, Ruth, Box 166.
Neusom, J. R.
Noot, W. Frank, or Elsie
Peckham, B.
Phelan, J. P., Box 564
Piggut, Clemie
Price, T. J.
Quillen, Emmett F.
Ratcliff, John
Richner, Mrs. Dana
Robinson, Mrs. Edw. B.
Rogers, Herbert
Rumler, Jose D.
Sayers, R.
Seigmour, Henry, Box 582.
Shoning, E. C.
Smith, S. F.
Stewart, Glenn
Syredis, Mike
Tatum, R. N.
Tedford, Oscar
Turner, Harold W.
Tuttle, Dr. H. K.
Watts, G. H., Box 525.
Watts, John
Wier, Charles
Wilcox, George

Empty Barrels for Sale.

Address inquiries to Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z.

Sale of Tug "Sanidad."

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., May 31, 1921, and then opened for the purchase of the tug *Sanidad*. Description and form of proposal may be had upon application. The Panama Canal reserves the right to reject any or all bids.

Sale of Barge No. 222.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., May 31, 1921, and then opened, for the purchase of steel barge *No. 222*. Description and form of proposal may be had upon application. The Panama Canal reserves the right to reject any or all bids.

Additions to Commissary Stock.

Dry Goods Section.

Cap devices, "Harbor Master and Dock Pilot," ea. $3.00
Cases, pillow, H. S., plain linen, 22½" x 36", pr. $4.55, $5.10, $5.65
Cases, pillow, emb. linen, 22½" x 36", pr. $5.10, $5.90, $6.60, $6.90, $7.10, $7.90, $8.30
Napkins, damask, linen, 14" x 14", ca. $0.87, $0.94, $1.05

Grocery Section.

Biscuits, N. B. Co., "De Lux," 1-lb. tin .. .61
Butter, peanut, P. C., 8½-oz. jar ..... .20
(Two cents for return of jar.)
Coffee, soluble, 2½-oz. tin ..... .69

MOVEMENTS OF OCEAN VESSELS.—Continued from page 571.

PORT OF CRISTOBAL—continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
April 18	Parismina	United Fruit Co.	New Orleans.
April 19	Ulua	United Fruit Co.	New York via wayports.
April 20	Camden	United Fruit Co.	Tampico.
April 19	Atlas[6]	Curacasche Scheepvart	Curacao.
April 19	Anam	Anglo-Saxon Co.	Curacao.
April 20	Coronado	Elders & Fyffes, Ltd.	Port Limon.
April 20	Santa Marta	United Fruit Co.	New York via Kingston.
April 20	Turrialba	United Fruit Co.	Bocas del Toro.
April 21	Buttercup[6]	United States Shipping Board	New Orleans.
April 22	St. Mihiel[12]	United States Army	San Juan, R. P.
April 23	Alliance	Panama Railroad Steamship Line	New York via Haiti.
April 23	San Bruno	United Fruit Co.	Port Limon.

[12] Transport.

*DEPARTURES.

Date.	Vessel.	Line.	For—
April 20	Coronado	Elders & Fyffes, Ltd.	Kingston.
April 20	Ulua	United Fruit Co.	New York via Port Limon and Habana.
April 20	Turrialba	United Fruit Co.	New Orleans.
April 20	Atlas[6]	Curacasche Scheepvart	Curacao.
April 21	Gen. W. C. Gorgas	Panama Railroad Steamship Line	Puerto Colombia.
April 21	Santa Marta	United Fruit Co.	New York via wayports.
April 21	Parismina	United Fruit Co.	New Orleans via Bocas del Toro and Habana.
April 22	Buttercup[6]	United States Shipping Board	Philadelphia.
April 22	Camden	United Fruit Co.	Tampico.
April 23	San Bruno	United Fruit Co.	Boston.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—
April 22	Aysen	South American Steamship Co.	Valparaiso.

Date.	Vessel.	Line.	For—
April 20	Circassian Prince	International Petroleum Co.	Talara.

*Other than ships passing through the Canal.

Current Net Prices on Coal, Fuel Oil, and Beef.

Coal is being supplied to steamships including warships of all nations delivered and trimmed in bunkers at $12.00 per ton of 2,240 pounds at Cristobal and $14.00 at Balboa. For ships in transit through the Canal, which are directed to take coal at Balboa, for the convenience of The Panama Canal, $12.00 per ton at Balboa. For ships when delivered from lighters in quantities of 50 tons or more, the price is $13.00 per ton at Cristobal, $15.00 at Balboa.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa for $2.75 per barrel of 42 gallons.

Diesel oil is sold at $4.00 per barrel. Cable arrangements should be made in advance of arrival of vessel.

The following are current prices on fresh beef sold from the cold storage plant of the Canal. Prices quoted are United States currency, per pound net:

Beef hinds, 21 cents; beef fores, 12½ cents; beef ribs, entire set, 23 cents; short loins, 29 cents. This beef is from Colombian cattle slaughtered on the Isthmus.

Route Service Jitney—Cristobal-Mt. Hope.

The following is the schedule of the official jitney service between the Terminal building at Cristobal and Mount Hope. Cars stop at the office of the Commissary Division each way:

Leave Terminal Building.		Leave Mount Hope.	
A. M.	P. M.	A. M.	P. M.
8.00	12.30	8.15	12.45
8.30	1.00	8.45	1.15
9.00	1.30	9.15	1.45
9.30	2.00	9.45	2.15
10.00	2.30	10.15	2.45
10.30	3.00	10.45	3.15
	3.30		3.45

COMMISSARY NOTES.

Epsom Salts.

The Commissary Division is now packing Epsom salts, complying with numerous requests from employees who are unable conveniently to call at the district dispensary for the ordinary free issue. The price is 17 cents per pound package.

Peanut Butter.

The Commissary Division has begun the packing of peanut butter, and has placed on sale an 8½-ounce jar which retails at 20 cents, with refund of 2 cents allowed for return of container. In addition to enabling customers to obtain this article more cheaply, this peanut butter will have the advantage of always being fresh.

Children's Straw Hats.

Very good values are to be found in the line of children's and juniors' braided straw hats just received and placed on sale. These are to be had in becoming shades of military blue, navy blue, tobacco brown, black, and variegated effects in red and green, red and blue, and gold and brown, and are priced at $1.55.

Empty Containers.

Empty soda water bottles and other containers for the return of which credit is allowed are being accepted in an unclean condition from some interests. This must be discontinued and bottles returned must have been washed and cleaned or they will not be taken back for refund. Aside from its desirability for sanitary reasons this preliminary cleansing will facilitate handling at the Commissary Division's plant.

Books.

Books received:

"Coloured Stars," by E. Powys Mathers; "Age of Innocence," by Edith Wharton; "Book of Games and Parties;" "House Boat on the Styx," by John Kendricks Bangs; "Great Pearl Secret," by C. N. and A. M. Williamson; "Swamp Breath," by Robert Simpson; "Mysterious Rider," by Zane Grey; "170 Chinese Poems," by Arthur Waley; "A Kiss for Cinderella," by J. M. Barrie; "Second Book of Modern Verse," by Jessie B. Rittenhouse; "Smoke and Steel," by Carl Sandburg; "Tales Out of Court," by Frederick T. Hill; "Pigs to the Market," by George A. Chamberlain; "Gentle Art of Columning," by C. L. Edson; "Further E. K. Means;" "She and Allan," by H. Rider Haggard; "In Red and Gold," by Samuel Merwin; "Hearts of Three," by Jack London; "Economic Consequences of the Peace," by Keynes; "Enter Madame," by Gilda Varesi and Dolly Bryne; "The Bad Man," by Charles Hanson Towne; "Master Eustace," by Henry James; Spanish-English Dictionary; "Young Forester," by Zane Grey; Collected Verses of Rudyard Kipling; "An Old Chester Secret," by Margaret Deland; "Beauty and the Bolshevists," by Alice Duer.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Canal Traffic in April.

Commercial traffic through the Canal for April was the lowest for several months. The number of commercial ships through the Canal was 227, the lowest since last July. Tolls amounted to $927,977.09, which is the lowest month since October. The tons of cargo carried by commercial vessels aggregated 906,062 tons, the lowest since July.

The total number of commercial vessels, Government vessels, and launches through the Canal as compared with the preceding month, and of the corresponding month of last year, was as follows:

	April, 1921.	March, 1921.	April, 1920.
Commercial vessels	227	255	235
United States Government vessels	26	37	9
Launches (under 10 tons)	9	11	2
Total vessels and craft	262	303	246

West Coast Fruit Trade via Panama.

The Seattle Chamber of Commerce announces that apple growers of Washington and citrus men of Southern California have joined in an agreement to guarantee 9,500 car loads of perishable fruit to a steamship company, the name of which is not announced, which has made a tentative proposition to handle this fruit to Gulf and Atlantic markets at a rate substantially lower than the present all-rail rate. Washington apple producers will guarantee 4,000 car loads of the total and will ship their apples to Seattle, a distance of about 250 miles, in box cars, place them in public terminals, which have already reduced the storage rate, and load the tonnage when refrigerated space is available.

Shipment of Californian Products.

Presaging a resumption in export trade from California, the San Francisco Chamber of Commerce reports the departure of the freighter *Steel Worker* with $600,000 worth of Pacific coast products, chiefly canned fruit and salmon. The *Steel Worker* arrived at Balboa April 7, and passed through the Canal the same day, and in addition to the canned goods mentioned above, carried 1,056,789 board feet of lumber from Everett, Wash. The cargo was destined for New York and Boston.

Removal of Washington Office, The Panama Canal.

In accordance with instructions issued by the Public Building Commission, which has full control over all Government owned and rented buildings in the District of Columbia, the Washington Office of The Panama Canal has removed from its old quarters at the Mills Building, 1709 G Street, N. W., to quarters assigned in the Old Land Office Building, 7th and E Streets, N. W. Employees going on leave, who contemplate calling at the Washington Office, should bear this in mind.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight April 30, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
[1]Lompoc	23	22.01	24	6.36	24	14.21	24	15.35	British	C. T. Bowring & Co	435.3	55.9	28.6	New Orleans	Taltal	Fuel oil	8,969	7,496	5,311
New York Maru	25	14.06	26	6.05	26	14.05	26	15.10	Japanese	Kokusai Kisen Kaisha	385.0	51.0	25.9	New York	Melbourne	Case oil	5,921	5,919	4,389
Yorba Linda	25	17.59	26	6.25	26	14.44	26	15.44	American	General Petroleum Co	453.0	56.0	29.0	Tecomate	San Pedro	Crude oil	10,500	7,642	5,364
Steel Age	25	14.12	26	6.30	26	15.46	26	17.10	American	United States Steel Products Co	395.0	55.0	27.5	New York	Los Angeles	General and steel	8,957	7,285	5,256
Taketoyo Maru	26	11.00	26	11.25	26	20.00	27	0.28	Japanese	Nippon Yusen Kabushiki Kaisha	445.0	58.0	26.0	Savannah	Kobe	General	7,945	7,596	5,456
Peru	20	18.00	27	6.08	27	13.26	27	14.30	British	Pacific Steam Navigation Co	350.0	43.1	18.3	Cristobal	Valparaiso	General	373	4,095	2,655
Woodarra	26	12.58	27	6.09	27	14.26	27	15.12	British	British-India Steam Nav. Co	449.0	58.0	30.9	London	Pt. Chalmers	General	6,319	8,238	5,313
Bradford	26	13.57	27	6.18	27	16.18	27	21.30	American	Standard Oil Co	428.0	51.0	29.0	Mata Redondo	Talara	Crude oil	8,700	7,318	5,458
Robert Dollar	26	20.20	27	7.30	27	16.44	27	17.50	British	Robert Dollar Steamship Co	523.0	65.0	21.0	New York	Shanghai	General	1,000	11,775	8,338
City of Norwich	26	20.59	27	8.30	27	17.15	27	18.45	American	Ellerman-Hall Line	434.0	54.0	27.0	New York	Yokohama	General	7,269	8,088	6,260
Eastern Admiral	26	8.30	27	9.20	27	18.52	27	20.00	American	Barber Steamship Co. (S. B.)	414.7	55.7	26.8	New York	Shanghai	(3)	7,098	7,257	5,269
Balboa	3-20	22.17	27	10.49	27	19.28	28	10.36	American	Colombian Maritime Co	190.0	29.0	11.1	Cristobal	Tumaco	General	19	741	350
Suruga	27	10.17	27	11.09	27	19.02	27	20.09	American	Barber Steamship Co	375.3	52.0	22.8	New York	Yokohama	General	4,168	5,177	3,877
Solana	26	21.50	27	12.03	27	21.20	27	22.32	American	Pacific Mail Steamship Co	435.0	56.6	28.1	Tampico	Iquique	Crude oil	9,568	7,043	5,050
Lake Floris	27	12.07	27	13.07	27	21.32	28	1.20	American	N. O. & S. A. S. S. Co. (S. B.)	251.0	43.6	17.0	New Orleans	Guayaquil	General	945	2,857	1,783
J. A. McKie [1]			27	6.00	27	8.15			American	United States Army				Cristobal	Gatun Lake				
Effingham	27	23.45	28	6.40	28	13.48	28	19.08	American	Williams, Dimond & Co. (S. B.)	402.6	54.8	17.6	London	Los Angeles	General	1,210	6,932	5,181
Pomona	28	8.00	28	8.22	28	14.47	28	15.50	American	Williams, Dimond & Co. (S. B.)	440.0	56.0	19.6	Glasgow	Los Angeles	General	1,000	8,300	6,026
Carpentaria	29	6.05	29	7.45	29	15.28	29	20.30	British	British-India Steam Nav. Co	436.0	53.0	26.6	St. John	Brisbane	General	3,150	8,082	5,440
Jason	28	5.17	29	12.52	29	19.48	30	8.16	Dutch	Royal Netherlands W. I. Mail Co	345.0	42.0	14.0	Amsterdam	Valparaiso	General	880	4,321	3,120
Jamaica	25	18.23	30	5.40	30	13.37	30	14.55	British	Pacific Steam Navigation Co	220.0	34.0	13.0	P. Colombia	Buenaventura	General	531	1,187	622
Potosi	28	18.43	30	6.13	30	15.12	30	16.15	British	Pacific Steam Navigation Co	381.0	49.0	20.3	Cardiff	Coronel	General	4,074	5,567	4,296
Santa Luisa	29	16.48	30	6.14	30	13.13	30	14.20	American	W. R. Grace & Co	360.2	51.6	23.0	New York	Valparaiso	General	3,147	5,694	3,975
Gen. Wm. Graham [2]			30	7.35	30	15.00			American	United States Army				Cristobal	Balboa				
Kina	29	18.32	30	7.55	30	16.07	30	17.15	Danish	Orient Steamship Co	385.0	53.0	15.6	Copenhagen	San Francisco	Ballast		6,080	4,618
Coalinga	29	22.14	30	8.38	30	18.49	30	19.55	American	Union Oil Co	470.0	55.0	29.8	Tampico	Los Angeles	Crude oil	10,000	8,107	5,539
Mantaro	24	15.20	30	10.05	30	17.49	30	18.44	Peruvian	Peruvian Steamship Line	360.0	46.0	19.2	Cristobal	Calloa	General	439	4,838	2,959

[1] Launch. [2] Mine planter. [3] Petroleum refined; petroleum by-products and general.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

La Brea	23	15.30	24	6.33	24	13.35	24	14.15	American	Union Oil Co. of California	435.0	56.0	19.6	Honolulu	Port Lobos	Ballast		7,405	5,157
Herakles	23	18.50	24	6.36	24	16.20	24	18.00	Norwegian	Bruusgaard & Co	390.0	54.1	25.0	Antofogasta	Philadelphia	Nitrate	8,040	5,680	4,220
Mantaro	23	22.00	24	7.48	24	15.20	30	10.05	Peruvian	Peruvian Line	354.0	45.6	20.6	Callao	Cristobal	General	2,505	4,838	2,959
Alrai Maru	24	20.00	25	7.05	25	14.09	25	15.32	Japanese	Osaka Shosen Kaisha	425.0	56.2	17.6	Yokohama	New York	(7)	1,858	7,902	5,633
Schodack	25	3.00	25	7.59	25	15.55	26	12.50	American	Barber Steamship Line (S. B.)	390.0	54.2	18.6	Manila	New York	General	2,200	6,105	4,401
Port Lyttleton	25	1.00	25	8.25	25	17.30	25	20.30	British	Commonwealth and Dom. Line	459.0	55.2	26.0	Brisbane	London	(8)	6,533	8,219	5,824
Guatemala	25	4.00	25	11.02	25	18.07			British	Pacific Steam Navigation Co	359.3	43.3	15.9	Valparaiso	Cristobal	General	213	4,210	2,744
Steel Mariner	25	10.50	25	12.00	25	19.35	26	10.53	American	Isthmian Steamship Line	424.2	56.2	26.0	Portland	London	General	7,840	7,539	5,448
Milverton [4]	24	19.30	25	14.31	26	3.37	30	8.08	Finnish	Berndt & Gronblom	280.0	40.2	23.7	Antofagasta	Falmouth [6]	Nitrate	3,490	2,250	2,024
Saint Louis	25	13.15	25	14.39	25	23.15	27	14.45	French	Compagnie Gen. Transatlantic	397.9	50.3	27.0	Talcahuano	Bordeaux	General	5,500	5,857	4,166
Chassie Maersk	25	14.30	25	15.19	25	24.00	26	12.03	Danish	A. P. Moller	361.9	51.4	25.0	Makatea	Hamburg	General	6,762	4,993	3,473
Los Angeles	26	4.30	26	8.01	26	15.27	26	15.27	American	Union Oil Co. of California	435.0	56.0	18.0	Los Angeles	Puerto Lobos	Ballast		7,379	5,195
Irtysh	26	7.00	26	8.47	26	17.00	26	19.18	Russian	Russian Volunteer Fleet Ass'n	375.7	55.1	24.1	Caldera	Rotterdam	Nitrate	6,119	5,475	3,939
Santa Ana	27	1.30	27	8.21	27	17.42	27	18.40	American	W R. Grace & Co	360.2	51.6	21.0	Valparaiso	New York	General	2,290	5,776	4,080
Mineola	27	11.20	27	11.54	27	18.56	27	19.47	American	W. R. Grace & Co	298.6	40.0	14.0	Pimentel	Baltimore	Ballast		2,835	1,821
Floridan	27	13.20	27	14.06	27	21.20	27	21.20	American	American-Hawaiian Line	415.0	53.7	26.0	Portland	New York	General	7,300	7,245	5,152
Darien [5]			27	12.10					American	R. Kopke				Balboa	Gatun				
Yoyoi Maru	28	11.55	28	12.48	28	21.35	29	8.15	Japanese	Kokusai Kisen Kaisha	400.0	53.0	25.6	Iquique	English chan'l	Nitrate	7,616		
S. C. No. 284			29	7.08	29	13.40			American	United States Navy	110.0	16.0		Balboa	Cristobal				
S. C. No. 355			29	7.08	29	13.40			American	United States Navy	110.0	16.0		Balboa	Cristobal				
Koyo Maru	29	13.00	30	6.44	30	14.59	30	18.07	Japanese	Toyo Kisen Kaisha	400.0	53.0	26.6	Valparaiso	Baltimore	Nitrate	6,925	6,233	4,398
Hamburg Maru	29	19.50	30	7.36	30	16.22	5-1	5.30	Japanese	Osaka Shosen Kaisha	400.0	54.5	20.0	Calcutta	New Orleans	General	1,643		
Acajutla	30	7.10	30	8.05	30	15.10			British	Pacific Steam Navigation Co	215.7	33.5	12.10	Guavaquil	Cristobal	(9)	276	1,273	706

[4] Sailer. [5] Launch. [6] For orders. [7] Porcelain, mustard seed, oil, and general. [8] Cold storage and general. [9] Cocoa, coffee, and ivory nuts.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
April 24	Atenas	United Fruit Co	New Orleans via way-ports.
April 25	Frednes	J. C. Knudsen	New York.
April 25	Cartago	United Fruit Co	New Orleans.
April 26	Toloa	United Fruit Co	New York via Habana.
April 27	San Gil	Clarke Service Co	Boston via Habana.
April 27	Haiti	French Line	Bordeaux via wayports.
April 27	Bacchus	Royal Netherlands W. I. Mail Co	Cartagena.
April 27	Atenas	United Fruit Co	Bocas del Toro.
April 29	Gen. W. C. Gorgas	Panama Railroad Steamship Line	Puerto Colombia.
April 29	La Navarre	French Line	St. Nazaire and wayports.
April 30	Cristobal	Panama Railroad Steamship Line	Norfolk.
April 30	Patuca	Elders & Fyffes, Ltd	Port Limon.
April 30	Ulysses	Panama Railroad Steamship Line	Norfolk.

*DEPARTURES.

Date.	Vessel.	Line.	For—
April 24	Atenas	United Fruit Co	Bocas del Toro.
April 26	Frednes	J. C. Knudsen	Port-of-Spain.
April 27	St. Mihiel [10]	United States Army	New York via San Juan.
April 27	Toloa	United Fruit Co	New York via Port Limon and Habana.
April 27	Alliance	Panama Railroad Steamship Line	New York via Haiti.
April 27	Atenas	United Fruit Co	New Orleans.
April 27	Hannibal	United States Army	High seas.
April 28	San Gil	Clarke Service Co	Port Limon.
April 28	Cartago	United Fruit Co	New Orleans via Bocas del Toro, and Habana.
April 28	Montevideo	Spanish Line	Puerto Colombia.
April 28	Bacchus	Royal Netherlands W. I. Mail Co	Puerto Barrios.
April 28	Crescent [11]	H. A. Bodden	Colon.
April 30	Haiti	French Line	Puerto Colombia.
April 30	Patuca	Elders & Fyffes, Ltd	Kingston.

[10] Transport. [11] Schooner.

PORT OF BALBOA.

				April 26	Aysen	South American Steamship Co	Valparaiso.

*Other than ships passing through the Canal.

Report of Financial Receipts and Expenditures of The Panama Canal.

BALBOA HEIGHTS, C. Z., April 26, 1921.

The Honorable, the Secretary of War,
Washington, D. C.

SIR:

1. Herewith is a report of the cash balance available in The Panama Canal appropriation, together with a statement of receipts and expenditures during the preceding month.

2. The cash balance in Panama Canal appropriations on March 31, exclusive of fortifications, was $11,058,468.77. The balance in fortification funds allotted to The Panama Canal for expenditure, was $473,781.75.

3. Payments made from appropriations by the Disbursing Clerk, Washington, amounted to $1,206,502.77, and by the Paymaster on the Isthmus, to $1,542,364.57. Payment of $310,483.20 was also made to the Panama Railroad Company for commissary books.

4. The total collections on the Isthmus amounted to $2,301,026.58, and are classified as follows:

Repaid to appropriations	$861,894.93
Commissary and other trust funds	312,700.40
Tolls	1,105,566.19
Sales of water	3,335.85
Postal receipts	12,052.72
Sale of obsolete material and equipment	1,911.79
Licenses, taxes, court fees, fines, etc	3,564.70
Total	$2,301,026.58

5. Collections by the Disbursing Clerk at Washington, amounted to $112,209.56. Deposits of $59,485.94 were made with the Assistant Treasurer of the United States to be applied on payment of tolls and other charges against vessels using the Canal. Receipts from Canal Zone and miscellaneous funds amounted to $298,629.98; disbursements from the same source were $72,797.26.

6. March payrolls on the Isthmus aggregated $1,294,841.14, as compared with $1,284,681.14 for the preceding month, and $1,336,016.07 for the corresponding month of last year.

JAY J. MORROW.
Governor.

Shipment from Far East.

The steamship *Alaska Maru*, which passed through the Canal on April 14, bound from Singapore to New York, carried among other items the following cargo: Six hundred thirty-four tons of raw rubber, 100 tons of tea, 85 tons of bamboo splits, 50 tons of gall nuts, 51 tons of hemp, 30 tons of hats, 551 tons of bean oil, and 514 tons of coconut oil. This cargo was billed for New York and Norfolk.

New Diesel Line.

The Holland-American Line and the Royal Mail Steam Packet Company have determined upon placing 6 new motorships, carrying freight only, in the trade between the North Pacific and Europe, supplementing the 3 coal-burning steamers now employed in this run. The 9 vessels will maintain fortnightly service.

The new motorships are vessels of 15,000 tons deadweight, propelled by Diesel engines. They have space for 1,500 tons of refrigerated products, and this feature, it is contemplated, will be an important factor in the success of the line. Large consignments of apples and oranges carried by vessels of this line, have already been successfully routed through the Canal.

Of the 6 vessels, the Holland-American Line is to supply 3 and the Royal Mail Steam Packet Company 3. The first of these motorships is expected to sail from Europe during the present month.

Wheat from Vancouver to Europe, via the Canal.

Mention was made in THE PANAMA CANAL RECORD, issue of April 20, of the passage through the Canal of the motorship *Buenos Aires* with a consignment of wheat from Vancouver to London. Commenting on this shipment, the weekly journal *Canada* with home offices at 110 St. Martin's Lane, London, says:

"The voyage of the Diesel motor-propelled vessel, *Buenos Aires*, from Vancouver to London, via Belfast, with 3,000 tons of wheat grown on the western prairies, has naturally attracted great interest not confined to shipping circles, inasmuch as this is the first cargo of Canadian wheat imported via the Panama Canal on an ordinary business basis.

"To celebrate the event a luncheon was given on board the *Buenos Aires* in the Millwall Dock on Wednesday of last week, while she was lying alongside the big grain elevator there discharging. Mr. Axel Johnson, a member of the firm, who, accompanied by his wife and children, has made the round voyage in the vessel, and Mrs. Johnson received the visitors, who included the Swedish Minister, Baron Pamstiera; the Swedish Consul General; Sir George Perley, High Commissioner for Canada; Mr. W. L. Griffith, secretary to the High Commissioner's office; Mr. F. C. Wade, Agent General for British Columbia; Mr. Harrison Watson, Senior Canadian Trade Commissioner in the United Kingdom; Mr. William Phillips, European Manager, Canadian National Railways and Canadian Government Merchant Marine; Mr. Fred C. Salter, European manager, Grand Trunk System."

The following is quoted from the editorial page of the same journal:

"The consignees of the big wheat shipment from the prairie provinces via Vancouver and the Panama Canal, which arrived in London last week, have reported that never was any shipment landed in better condition; while millers and merchants on the London Corn Exchange speak highly of the quality of the grain.

"The value of the Panama route for the transportation of grain and other produce from Alberta and British Columbia is only now beginning to attract the attention which it would assuredly have been given if the war had not broken out so soon after the Canal was effectively open to traffic."

Repairs to Steamship "Tregantle."

The British merchant vessel *Tregantle*, operated by Edward Hain & Sons, St. Ives, Cornwall, England, and under charter to the Pacific Steam Navigation Company, collided in a dense fog on the morning of March 25, ran into Macabe Island, a lone rock projecting above the water situated about 5 miles off the Peruvian coast in the vicinity of Callao, to which port the vessel proceeded immediately after her disaster, where Lloyd's representative, after examination of the injuries, ordered her to proceed to Balboa for necessary repairs.

Upon reaching Balboa it was found that the bow had been driven back and crumpled up like an accordion for a distance of about 20 feet aft. The stem of the vessel and forward part of the keel were destroyed. She was put in dry dock and practically a new bow built on her in the course of 17 days. In detail the work was carried out in the following manner:

After discharging sufficient of her cargo to permit safety in handling, the *Tregantle* was dry-docked at the Balboa shops April 14. It was found that her stem was broken from a point about 9 feet from the top, the impact of the collision with the rock having been sufficient to crumple up the bow with the line of damage extending diagonally downward and backward to the collision bulkhead. The stem, plates, frames, and stringers were so badly broken and twisted that it was found most economical to cut out the entire damaged section by the oxy-acetylene process.

Such of the frames as could be retained were cut off at various heights, wherever good metal could be found, extreme care being

exercised that they were well staggered to insure proper strength; the butts being then spliced and electric welded. It was necessary to remove and entirely replace frames Nos. 1 and 2 on the starboard side, and Nos. 1, 2, and 3 on the port side.

A particular feature of the job was the short length of the plates found near the bow, permitting replacement at less cost than would ordinarily have been the case. Number 1 flat keel, which was a furnaced plate, was renewed and also 10 strakes above on either side. In one or two instances the plates extended slightly aft of the collision bulkhead. Number 1 waist plate on the port side was removed, faired, and replaced; the starboard waist plate was also faired and placed. All floors and vertical keel intercostal plates were renewed from frame No. 1 to No. 9. Number 1 vertical keel plate from the collision bulk head to frame No. 13, and the lower plate on the collision bulkhead were also renewed.

The impact of the vessel in striking drove both hawse pipes upward, and broke the lip and chafing slab on the port side. The hawse pipe was acetylene welded and a new chafing plate was cast in the foundry and installed. One fluke of the port anchor was also broken; this was salvaged by forging a new end for the fluke and thermit welding it in place.

A fortunate feature of the accident was that the No. 1 double bottom tank top and the collision bulkhead were not sufficiently ruptured to damage the cargo in No. 1 hold. After completion of the repairs in dry dock the forepeak tank and No. 1 double bottom tank was tested to Lloyd's rules, and the vessel was undocked and proceeded to dock No. 18 on the 2d instant for reloading of discharged cargo. She is due to proceed on her voyage to ports of the United Kingdom on the 6th instant.

The *Tregantle* is rated as of 5,741 tons registered gross; 4,279 tons registered net; her dimensions are 400 feet length, 52 feet beam. Her transit cargo amounted to 6,168 tons of nitrate of soda, borax, barley, and miscellaneous items from the South American west coast.

This is the third vessel repaired at the Balboa shops during the year for similar damages to bows resulting from head-on collisions. The *Sussex* of the Federal Steam Navigation Company was completed on March 9; and the *Steel Inventor* of the United States Steel Products Company on March 28.

Tallow.

The steamship *Port Melbourne*, which passed through the Canal April 23, enroute from Sydney to London carried, among other items of cargo, 1,154 tons of tallow. Other shipments of tallow through the Canal during the past month have been 528 tons on the steamship *Kumara* on April 18; 206 tons on the steamship *Dorset*, and 100 tons on the steamship *Stuartstar*, on the 16th; 436 tons on the steamship *Pakeha*, on the 14th; 490 tons on the steamship *Waiwera*, on the 13th; and 241 tons on the steamship *Opawa*, on April 6. These latter shipments were all from New Zealand to London, making a total of more than 3,000 tons from Australasia to the British Isles during April.

Oil Prices at Various Ports.

By courtesy of Willard, Sutherland & Company, Inc., oil bunkering prices at foreign ports as of March 20, 1921, are given below; all quotations being for tons in English shillings unless otherwise stated:

	Fuel oil.	Diesel oil.
Adelaide	200/0	225/0
Alexandria	150/0	.....
Amsterdam[1]	Fl. 80	Fl. 115
Antwerp	(2)	(2)
Avonmouth[3]	140/0	200/0
Bombay	180/0	205/0
Balik Papan	150/0	175/0
Bankok	180/0	205/0
Batavia	180/0	205/0
Brixham	140/0	.....
Buenos Aires	180/0	.....
Calcutta	180/0	205/0
Capetown	200/0	225/0
Colombo	180/0	205/0
Glasgow	140/0	.....
Gibraltar[4]	.....	.....
Hongkong	180/0	205/0
Hull[3]	140/0	200/0
Hurghada	150/0	.....
Karachi	180/0	205/0
Las Palmas[5]	130/0	.....
Lisbon	130/0	190/0
Liverpool[3]	140/0	200/0
Madras	180/0	205/0
Malta	150/0	180/0
Manchester	140/0	220/0
Melbourne	200/0	225/0
Mombasa	200/0	.....
Montevideo	[5] 180/0	.....
Newcastle	140/0	.....
Nagasaki	180/0	205/0
Palembang	180/0	205/0
Pankalan Brandon	180/0	205/0
Panama[6]	(6)	(6)
Penang	180/0	205/0
Plymouth	140/0	.....
Port Said	150/0	.....
Pulo Samboe	180/0	205/0
Rio de Janeiro	180/0	265/0
Rotterdam[1]	Fl. 80	Fl. 115
St. Thomas	.....	.....
Sabang	180/0	205/0
Saitozaki	180/0	205/0
Santos	[5] 180/0	.....
Shanghai	[7] 180/0	[7] 205/0
Singapore	180/0	205/0
Sourabaya	180/0	205/0
Suez[8]	150/0	180/0
Sydney	200/0	225/0
Southampton	140/0	220/0
Tarakan	150/0	175/0
Thameshaven[3]	140/0	200/0
Trinidad	$15.50	.....
Yokohama	180/0	205/0

OIL AT PANAMA CANAL.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa for $2.75 per barrel of 42 gallons.
Diesel oil is sold at $4 per barrel. Cable arrangements should be made in advance of arrival of vessel.

[1] Solar Fl. 160. [2] No oil available. [3] Gas oil 11 d per gal. [4] United States Shipping Board supplying. British Admiralty will not supply commercial vessels. [5] Plus dues. [6] Quoted separately at bottom of table. [7] Plus towage. [8] Solar 215/0.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ending April 30:

Spanish cruiser *Espana*, docking, cleaning, and painting bottom, repairing hull forward where damaged through grounding; miscellaneous minor repairs to hull and engineer's departments, consisting of repairs to drains and vent and sounding pipes in engine rooms; overhauling various pumps, renewing suction and discharge lines to circulators, repairing ash hoist trunk, renewing discharge pipes on ash ejectors, manufacturing evaporator coils, manufacturing one boat boom, repairing and rerivetting torpedo net platform and renewing miscellaneous eye pads and ring bolts

on deck; examining rudder, overhauling sea valves and zincs on hull; steamship *Tregantle*, docking, cleaning, and painting bottom, renewing stem and 9 frames port and starboard, repairing and renewing plates back to No. 10 frame to upper 'tween deck level; repairing one broken anchor and overhauling anchor cables; repairing cracked hawse pipes; all the above being result of collision at sea; steamship *Kiyo Maru*, docking, cleaning, and painting bottom, overhauling sea valves, cementing up propeller hub, testing cargo tanks and making all tight; removing fumigating and sanitary system in 'tween decks, cleaning wire-brushing and cargo tanks; tug *Gorgona*, docking, cleaning, and painting bottom, electric-welding propeller, straightening rudder stock, overhauling sea valves, overhauling fire pump, installing new general service pump, renewing water end on sanitary pump, overhauling galley smoke pipe; tug *Cocoli*, overhauling steering engine and miscellaneous engineering repairs; launch *Vacuum, Jr.*, repairing damaged bow, renewing floor and hatch covers and reinstalling engine; barge *No. 201*, renewing plates, fenders, and deck on one corner where damaged, rebuilding stanchions on roof; barge *No. 137*, docking, staging, cleaning and painting bottom, cleaning and painting inside and out; renewing hopper sheathing and strongback sheathing, and rebuilding strongbacks and A frames; overhauling operating gear; launch *Coco Solo*, renew stem, repair monkey rails and repair copper sheathing; tug *Miraflores*, docking, cleaning and painting bottom, repairing fenders and rail; steamship *Aysen*, minor boiler repairs; subchaser *No. 285*, docking, cleaning bottom, patching copper, calking leaks in bottom and recalking deck; subchaser *No. 355*, docking, cleaning bottom, patching copper, and recalking where leaking.

The following vessels were at the Cristobal shops for repairs during the week ending May 2:

Steamships *Ulysses*, *Gen. H. F. Hodges*, *Cristobal*, *Gen. W. C. Gorgas*, *Allianca*, miscellaneous repairs and painting to engine, deck, and steward departments; *Maravi*, rebore stem end of Weir's pump; dry dock, clean and paint; manufacture and install new funnel, etc.; tanker *Doewa*, alter crew accommodation; manufacture, fit, and install steel water-tight doors as per plan furnished, examine and repair gravity tank valves, etc; tanker *Anam*, clean and paint bottom; clean pistons and rings of main engines, examine same and renew as necessary; true up main bearings, etc.; steamship *West Wind*, open dynamos, steering engine, circulating engine, sanitary pump and renew valves and rings where necessary, etc.; steamship *Guatemala*, electric weld starboard hawse pipe, top, and bottom; manufacture, fit, and install one chafing plate at upper end of pipe; fit and install one section of pipe and patch deck at lower end of pipe, etc.; steamship *Eastern Admiral*, thoroughly purge refrigeration system and repair 7 valves on system; steamships *Caribbean*, *Teviot*, *Benjamin Brewster*, *Poe*, *Haiti*, and *Jamaica*, launch *Doris*, dredge *No. 86*, launch *Vedette*, minor repairs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending April 30, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	*Tons.*
Mantaro	Peruvian Line	April 24	April 30	2,505	439
Saint Louis	French Line	April 25	April 27	(1)	25
Cartago	United Fruit Co	April 25	April 28	453	182
Jamaica	Pacific Steam Navigation Co	April 25	April 30	12	82
Tolua	United Fruit Co	April 26	April 27	187	220
Allianca	Panama Railroad Steamship Line		April 27		1,524
Peru	Pacific Steam Navigation Co		April 27		392
Balboa	Caribbean Steamship Line		April 27		30
Atenas	United Fruit Co	April 27	April 27	6½	4
San Gil	United Fruit Co	April 27	April 28	65	101
Bacchus	Royal Netherlands W. I. Mail	April 27	April 28	(1)	934
Haiti	French Line	April 27	April 30	55	134
Jason	Royal Netherlands W. I. Mail	April 28	April 29	327	(2)
Potosi	Pacific Steam Navigation Co	April 28	April 30	216	(2)
Gen. W. C. Gorgas	Panama Railroad Steamship Line	April 28		41	
La Navarre	French Line	April 29		8	
Acajutla	Pacific Steam Navigation Co	April 30		276	
Ulysses	Panama Railroad Steamship Line	April 30		12,107	
Patuca	Elders & Fyffes, Ltd	April 30	April 30	60	(2)
Cristobal	Panama Railroad Steamship Line	April 30		10,630	
Point Lobos	Pacific Mail Steamship Line	April 30		85	
Ottar	Caribbean Steamship Co	April 30		5	
Guatemala	Pacific Steam Navigation Co	April 25		213	

[1] No cargo discharged. [2] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending April 30, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	*Tons.*
Aysen	Cia Sud America de Vapores	April 23	April 26		62
Peru	Pacific Steam Navigation Co	April 27	April 27		2
Balboa	Colombia Maritime Co	April 27	April 27		13

Notice to Mariners—Obstruction to Navigation.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 25, 1921.

CIRCULAR No. 643–82.

The master of the steamship *Steel Mariner* reports by radio having passed at 8.20 a. m., on April 23, while in latitude 7° 55′ North, longitude 83° 15′ West, a derelict steel barge, U. S. *No. 4*, stern protruding about 7 feet and bow about 3 feet above water, very dangerous to navigation.

JAY J. MORROW,
Governor.

Rates at Hotel Aspinwall, Taboga.

Effective May 1, the following commutation rates at the Hotel Aspinwall, Taboga, were discontinued:

Nonemployees, per week	$17.50
Nonemployees, per month	70.00
Employees, per week	12.50
Employees, per month	50.00

A Revised Schedule of the Ancon-Balboa Bus Line.

Leave Ancon clubhouse 3 p. m., 3.30 p. m., 4 p. m., and every 15 minutes thereafter until 10.45 p. m.

Leave Balboa clubhouse 2.45 p. m., 3.15 p. m., 3.45 p. m., and 4.15 p. m., and every 15 minutes thereafter until 10.30 p. m. There will be no 10.45 p. m. bus from Balboa, but one will leave at 11 p. m.

Additions to the Panama Canal Library.

The following are among the books that have been added to the Panama Canal Library recently:

Abbot, E. H., "Peace on Earth Good Will to Dogs."
Adams, Katherine, "Mehitable."
American Architect, "American Architect Specification Manual."
Asch, Shalom, "Uncle Moses."
Aslan, Kevork, "Armenia and the Armenians from the Earliest Time until the Great War."
Baldwin, Marian, "Canteening Overseas."
Benington, Arthur, "Who Shall Control the Adriatic."
Blasco, Ibañez, Vicente, "Mexico in Revolution."
Bleyer, W. G., "How to Write Special Feature Articles."
Bouton, Stephen M., "And the Kaiser Abdicates; the Story of the Death of the German Empire and the Birth of the Republic."
Bowen, William, "The Enchanted Forest."
Brooks, Phillips, "Essays and Addresses."
Brower, Harriette M., "Vocal Mastery; Talks with Master Singers."
Bryce, J. B., Viscount, "Holy Roman Empire."
Channing, Edward, "A Student's History of the United States."
Clark, Thomas A., "The High School Boy and His Problems."
Close, Evelyne, "Cherry Isle."
Colum, Padriac, "The Boy Apprenticed to an Enchanter."
Corbett, Sir Julian S., "Naval Operations."
Daniels, John, "America via the Neighborhood."
Dickinson, Clarence, "Troubadour Songs."
Drinkwater, John, "Pawns."
Elson, Arthur, "Critical History of Opera."
Ervine, St. J. G., "The Foolish Lovers."
Field, Eugene, "Second Book of Verse."
Fife, G. B., "The Passing Legions."
Frothington, T. G., "A Guide to the Military History of the World."
Fryer, Eudenie M., "A Book of Boyhoods, Chaucer to MacDowell."
Gerould, G. H., "Youth in Harley."
Goodsell, Willeystine, "The History of the Family as a Social and Educational nstitution."

Hartshorne, A. C., "Japan and Her People."
Hayes, Carlton J. H., "A Brief History of the Great War."
Henderson, Daniel M., "Jungle Roads and Trails of Roosevelt."
Hopkins, Albert A., "The Scientific American Cyclopedia of Formulas."
Hoyt, F. G., "River Discharge."
Hungerford, Edward, "With the Doughboy in France."
Hurll, E. M., "How to Show Pictures to Children."
Kimball, Everett, "The National Government of the United States."
Latane, John H., "The United States and Latin America."
Locke, W. J., "The Red Planet."
Munro, J. P., "Human Feature in Education."
Newbolt, Sir Henry, "The Book of the Long Trail."
Norris, Mrs. K., "Harriet and the Piper."
Parrish, Randall, "The Mystery of the Silver Dagger."
Pitt, S. G. L. F., "The Purpose of Education."
Pratt, W. S., "The History of Music."
Scudder, Horace E., "The Book of Fables and Folk Stories."
Simonds, F. H., "History of the World War."
Sullivan, Alan, "The Rapids."
Taft, H. W., "Occasional Papers and Addresses of an American Lawyer."
Verrill, A. H., "The Trail of the White Indians."
Wells, H. G., "The Outline of History."
Wilson, J. F., "Scouts of the Desert."

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z., (telephone 286).

Apprentice (male and female); $600 to $700 a year; form 1800; announcement No. 312-amended; age, 16 but not 18 years; vacancies exist in the Coast and Geodetic Survey, Geological Survey.[1]

Assistant instructor, Motor Transport Training School, $1,800 to $2,000 a year; No. 359-amended supplemental; amended to show closing date as April 19, 1921.

Crane and conveyor operator, 69 cents per hour (male and female); form 1800; age, 20 but not 50 years; vacancies exist in the Bureau of Mines, Washington, D. C.; June 8, 1921.[2]

Educational director, $1,800 to $2,400 a year; teachers, $1,600 to $2,400 a year (male and female); form 2118; announcement No. 570-amended; age, within reasonable age limits; vacancies exist under the Federal Board for Vocational Education; July 1, 1921.[2]

Hardwood finisher, $1,200 a year (male and female); form 1800; announcement No. 224; age, 20 but not 50 years; vacancies exist in the office of the Chief Clerk and Superintendent, Treasury Department, Washington, D. C.; May 24, 1921.[2]

Irrigation engineer, $2,400 or over a year; civil engineer, $2,400 or over a year; assistant irrigation engineer, $1,500 to $2,280 a year; assistant civil engineer, $1,500 to $2,280 a year; junior irrigation engineer, $1,200 to $1,400 a year; junior civil engineer, $1,200 to $1,440 a year; engineering draftsman, $1,200 to $2,400 a year; form No. 1312 (male and female); announcement No. 222; vacancies exist in the Reclamation Service; August 1, 1921.[1]

Junior mechanic, $2 per diem (male and female); form 1800; announcement No. 230; vacancies exist in the Mail Equipment Shop of the Post Office Department, Washington, D. C.; age, 16 but not 30 years.[1]

Laboratory aid in parasitology, $1,200 a year (male and female); form 1312; age, below 45 years; vacancies exist in the Bureau of Animal Industry, Department of Agriculture, Washington, D. C.; June 8, 1921.

Pigeon expert, $1,800 to $2,400 a year (male and female); form 1312; announcement No. 229; age, 20 but not 55 years; vacancies exist in the Signal Service at Large, Camp Alfred Vail, N. J., May 24, 1921.[2]

Preparator (male and female); $850 a year; form 1312; age, 18 but not 55 years; vacancies exist in the Division of Insects; June 8, 1921.

Refinery engineer; $3,000 to $4,200 a year (male and female); form 1312; announcement No. 228; age, within reasonable age limits; vacancies exist in the Bureau of Mines, Department of the Interior, Washington, D. C.[2]

Research reference assistant, $1,600 to $2,200 a year (male and female); form 1312; announcement No. 228; age, below 55 years; vacancies exist in the Bureau of Mines, Department of the Interior, Pittsburg, Pa.; May 25, 1921.

Sound inspector; $8 to $9.60 per diem (male and female); form 1312; announcement No. 219; age, within reasonable age limits; vacancies exist in the Bureau of Engineering, Navy Department, Washington, D. C.; May 24, 1921.[2]

Specialist in foreign education systems, $1,800 a year; specialist in rural schools, $2,260 a year (male and female); form 2118; age, below 70 years; vacancies exist in the Bureau of Education, Department of the Interior, Washington, D. C.; June 7, 1921.

[1] Nonassembled. Applications will be received at any time until further notice.

[2] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Panama, Washington."

Deceased and Insane Employees.

The estates of the following deceased or insane employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings, or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

DECEASED.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Frederic Hugo Stephens	370	United States	Ancon	Executive Department	April 14, 1921.
Nathan Rodney	23771	Jamaica	Colon	Coaling Station	March 22, 1921.
Seifert Boldon	32278	Barbados	Colon	Commissary Division	March 30, 1921.
Alexander Blessington, *alias* Bridgington, *alias* Bringington	25029	Jamaica	Colon	R. & F. Agency	April 21, 1921.
Manassah Campbell	37680	Jamaica	La Boca	Fortifications Div.	April 24, 1921.
Steven D. McPhate	3961	United States	Gatun	Cattle Industry	March 22, 1921.

INSANE.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of commitment.
John Carmichael	37536	Barbados	Panama	Health Department	January 13, 1921.
Eugene L. Grazette	43783	St. Lucia	Panama	Building Division	January 13, 1921.

Official Circulars.

Acting Chief Health Officer.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 25, 1921.

To all concerned—Effective April 27, 1921, and during the absence of Col. H. C. Fisher, U. S. A., on leave, Dr. D. P. Curry will act as Chief Health Officer.

JAY J. MORROW,
Governor.

Chief of Property and Requisition Bureau.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 23, 1921.

To all concerned—Effective April 23, 1921, Mr. Otto T. Marstrand is appointed Chief of the Property and Requisition Bureau, Executive Office, *vice* Mr. Hubert H. Hammer, appointed Surveying Officer.

JNO. H. SMITH,
Acting Executive Secretary.

Approved:
JAY J. MORROW,
Governor.

Examinations for Civil Engineers.

THE PANAMA CANAL,
EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 26, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

Examinations for junior engineer, surveyor and recorder in the Panama Canal service are hereby announced to be given at Balboa Heights, C. Z., in room 314, Administration Building, on Saturday, May 7, 1921, beginning at 8 a. m. Five hours will be allowed for completing these examinations.

According to Circular No. 603-13, all promotions to the grade of junior engineer shall be made by selection from an eligible list established by means of an examination held by the Local Board of Examiners for the promotion of recorders and surveyors. This examination will include the following subjects:

1. Mathematics.
2. Surveying.
3. Design and construction.

The weights to be given these subjects will be decided at a later date, but the applicant will be given this information before beginning the examination. Applicants should file with their examination papers a statement as to their education and experience. Applicants for the junior engineer examination may bring to the examination room any reference books. This examination is open to all recorders, surveyors and draftsmen now in the service of The Panama Canal.

The examination for surveyor is open to all recorders and draftsmen employed by The Panama Canal.

The Board will endeavor to make these examinations as practical as possible to the work of The Panama Canal by incorporating in the examination test questions made up from suggestions by the head of the various departments and divisions who employ engineers.

Application to take these examinations should be made to the Secretary of the Local Board at Balboa Heights, from whom further detailed information may be obtained relative to these examinations.

Local Board of Examiners,
O. E. MALSBURY, *Chairman.*
J. F. WARNER, *Secretary.*
Telephone No. 286, Balboa.

Sale of Typewriters.

The Panama Canal has for sale a number of used Underwood typewriters at reasonable prices. Some of these machines are at Balboa storehouse and others at Cristobal storehouse, where they may be inspected and purchased direct.

Shipping Commissioner's Sale.

The Shipping Commissioner, room 305, Administration Building, Balboa Heights, C. Z., will accept written bids up to noon May 9, 1921, for the purchase of the personal effects belonging to the estate of Martin Johnson, deceased American seaman. Prospective bidders desiring to examine the effects should apply to the Shipping Commissioner's office, Balboa Heights, on any business day.

Empty Barrels for Sale.

Address inquiries to Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z.

Sale of Lumber.

The Panama Canal has on hand at Balboa storehouse considerable quantities of 1" x 6", 1" x 8", and 1" x 10" dressed lumber, Douglas fir, grade 1, select common. Further information will be furnished by General Storekeeper, Balboa, or at office of Chief Quartermaster, Balboa Heights.

Sale of Tug "Sanidad."

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., May 31, 1921, and then opened for the purchase of the tug *Sanidad*. Description and form of proposal may be had upon application. The Panama Canal reserves the right to reject any or all bids.

Sale of Barge No. 222.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., May 31, 1921, and then opened, for the purchase of steel barge *No. 222*. Description and form of proposal may be had upon application. The Panama Canal reserves the right to reject any or all bids.

Additions to Commissary Stock.

Dry Goods Section.

Belts, tan, No. 3, without buckles, ea.	$0.65
Dress goods:	
Organdie, printed, 38", yd.	.55
Voile, liberty, fancy colored, 38", yd.	.45
Voile, shower, 35/36", assorted colors, yd.	.29
Floss, darning, Richardson's, mercerized, spool	.04
Hats, girls', straw, ea.	1.55
Stationery:	
Cards, place, ea.	.02, .03, .05
Clips, Faultless, for fountain pens, ea.	.08
Dictionaries, Webster ("Handy" size, ea.	.33
Stilleto, bone, ea.	$0.03
Towels, hemmed, Turkish, 18" x 36", ea.	.40

Grocery Section.

Molasses, P. C., 25-oz., bot. (5 cents allowed for return of empty glass.)	.26
Salts, Epsom, P. C., 1-lb. pkg.	.17
Sauce, apple, P. C., 10-oz. glass (2 cents allowed for return of empty bottle.)	.15
Tea, Ceylon, 10-lb. caddy, lb.	.27

Hardware Section.

Brooms, corn, medium, P. C., ea.	.73
Carriages, ivory sulkies, ea.	13.20
Corks, extra, for vacuum bottles, ea.	.18
Nappies, cut glass, ea.	2.00
Strainers, sink, 8" x 7½" x 5", ea.	.24

Taboga Launch Schedule Effective May 1, 1921.

	A. M.
From dock No. 19, Balboa every day, including Sundays and holidays	10.30
	P. M.
Saturdays and days preceding holidays	5.00
From Taboga:	P. M.
Week days	12.30
Sundays and holidays	6.30

Schedule of Official Jitney Service

Following is the schedule of the official jitney plying between Balboa shops and the Ancon police station, carrying employees in the conduct of official business, upon presentation of passes issued by the Chief Quartermaster or of the "special pass" issued by the Governor:

FROM ANCON POLICE STATION TO BALBOA SHOPS.

Police Station	Leave on the hour and half hour.
Administration Building	Leave 7 minutes and 37 minutes after the hour.
Balboa Commissary	Leave 10 minutes and 40 minutes after the hour.
Balboa shops	Arrive 15 minutes and 45 minutes after the hour.

FROM BALBOA SHOPS TO ANCON POLICE STATION.

Balboa shops	Leave 15 minutes and 45 minutes after the hour.
Port Captain's Office	Leave 18 minutes and 45 minutes after the hour.
Balboa Commissary	Leave 20 minutes and 50 minutes after the hour.
Administration Building	Leave 25 minutes and 55 minutes after the hour.
Ancon Police Station	Arrive on the hour and half hour.

COMMISSARY NOTES.

Price Reductions—Dry Goods.

Widespread reductions have occurred in the prices of certain dress goods, ranging from 7 cents the yard on cotton crepe and nainsook to 50 cents the yard on silk crepe. Gingham, shirting, poplin, batiste, calico, cambric, long cloth, cord cloth, muslin, and black voile are among the other items affected. White cotton thread, 500-yard, has dropped in price from 33 cents to 20 cents the spool. Sheets 90" x 108" formerly priced at $4.60 may now be obtained for $3. Four patterns of curtain drapery also have responded to the decline in prices.

Leather Goods.

A line of manufacturer's samples of the highest quality leather goods has just been distributed among Ancon, Balboa, and Cristobal commissaries. Included in the items offered are handsome fitted writing cases in black and brown, small purses in gray suede, wallets, bill folds, memorandum books, dressing cases, photograph cases, Portsea and coin purses. These are made by one of the best known firms in London and are excellent value. Only a few of each article are available.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Volume XIV. Balboa Heights, C. Z., May 11, 1921. No. 39.

Statement of Commercial Traffic Through the Panama Canal From its Opening to Date.

Below is given a comparative statement of the commercial traffic passing through the Panama Canal from its opening on August 15, 1914, to April 30, 1921. Where tonnage figures have been omitted, it is because of incomplete records of tonnage during the early years of Canal traffic.

	No. of ships.	TONNAGE.				Tolls.	Tons o cargo.
		U. S. equiv.	P. C. net.	Reg. gross.	Reg. net.		
July, 1920	225	705,643	856,798	1,109,079	702,951	$842,312.05	886,814
August, 1920	266	782,415	951,345	1,208,471	770,320	936,209.44	1,040,740
September, 1920	256	832,742	1,008,785	1,293,470	817,810	1,010,150.63	1,009,557
October, 1920	238	762,013	935,579	1,190,936	754,540	911,825.58	991,066
November, 1920	238	765,817	929,875	1,184,072	756,223	933,912.11	984,910
December, 1920	265	832,407	1,027,918	1,298,864	823,758	1,007,849.32	1,076,539
January, 1921	279	894,689	1,094,323	1,383,778	883,362	1,095,857.46	1,177,053
February, 1921	241	763,925	916,838	1,179,979	752,022	917,412.49	952,904
March, 1921	255	924,309	1,112,818	1,417,220	917,441	1,105,536.55	1,084,563
April, 1921	227	771,116	955,503	1,203,087	757,576	927,977.09	907,613
First 10 months of fiscal year 1921	2,490	8,035,076	9,789,782	12,486,956	7,936,003	9,689,042.72	10,111,759
Fiscal year 1920	2,478	7,089,230	8,546,044	11,059,819	7,037,875	8,513,933.15	9,374,499
Fiscal year 1919	2,028	5,193,812	6,145,094	7,876,603	.....	6,172,828.59	6,946.540
Fiscal year 1918	2,068	5,440,114	6,584,073	9,371,339	.....	6,438,855.55	7,533,031
Fiscal year 1917	1,806	.....	5,817,607	8,530,821	.....	5,631,781.66	7,083,045
Fiscal year 1916[1]	760	.....	2,385,284	3,596,529	.....	2,399,830.42	3,063,371
Fiscal year 1915[2]	1,072	.....	3,772,167	5,416,787	.....	4,343,383.69	4,926,145

[1] Canal was closed to traffic from September 18, 1915, to April 15, 1916.

[2] Canal was opened to commercial traffic August 15, 1914.

Addition to Tariff No. 4—Coal.

THE PANAMA CANAL,
PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., May 7, 1921.

To all concerned—The following addition is made to Tariff No. 4, Schedule of Rates for Supplies and Services furnished to Shipping and Allied Interests at the Panama Canal:

Item 21—COAL.

Effective May 10, 1921.

Vessels desiring to purchase coal at the Panama Canal will place their orders with the office of the Port Captain at Cristobal or Balboa, stating the number of tons required and the hour they will be ready to receive the coal.

Their order will be transmitted to the plant to which they are assigned to take coal and they will be expected to be ready to accept delivery at the time specified.

Every effort will be made to expedite the coaling of all vessels, but, if after arrangements have been made with agents or masters and coaling can not proceed through the fault of the vessel or its agents, the expense involved will be charged against the ship.

J. J. MORROW,
Governor, The Panama Canal.
President, Panama Railroad Company.

(NOTE—The above addition will be included in Supplement No. 4 to Tariff No. 4 when this supplement is issued.)

Canal Traffic in April.

The number of commercial ships passing through the Canal in April, 1921, was 227, an average of 7.6 per day. Their aggregate net tonnage, Panama Canal measurement, was 955,503 tons. The total cargo carried was 907,613 tons of 2,240 pounds. The tolls earned aggregated $927,977.09.

The April traffic was distributed over trade routes as shown in the following tabulation:

ATLANTIC TO PACIFIC.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
United States coastwise:							*Long tons.*
United States	19	75,348	92,033	115,091	74,290	$94,185.00	94,484
From East Coast of United States to West Coast of South America:							
United States	8	19,411	25,270	32,155	19,459	24,263.75	23,464
British	4	12,521	16,053	21,722	12,967	15,726.25	13,946
Norwegian	2	4,561	5,614	7,354	4,549	5,701.25	8,539
Totals	14	36,493	46,937	61,231	36,975	45,691.25	45,949
From East Coast of United States to Far East:							
British	5	24,580	30,504	35,975	22,639	30,725.00	32,414
United States	4	16,331	19,761	22,840	14,190	20,413.75	26,758
Japanese	3	14,017	15,159	19,496	12,651	17,169.85	21,502
Totals	12	54,928	65,424	78,311	49,480	68,308.60	80,674
From Europe to West Coast of South America:							
British	5	16,278	21,952	25,895	16,225	20,347.50	17,034
Dutch	3	8,001	13,050	12,825	8,032	10,001.25	2,807
French	1	3,566	4,081	5,681	3,600	4,457.50	503
Danish	1	3,127	4,090	4,950	3,163	3,908.75	3,000
Peruvian	1	2,018	2,252	3,287	1,993	1,621.44	.....
German	1	1,118	1,361	2,064	1,182	1,397.50	1,600
Totals	12	34,108	46,786	54,702	34,195	41,733.94	24,944
From Cristobal to West Coast of South America:							
British	6	3,565	5,144	7,203	4,048	4,409.83	1,097
Peruvian	2	2,719	5,345	9,020	4,517	3,398.75	1,577
Chilean	1	1,811	3,182	3,798	2,272	2,263.75	1,214
United States	1	336	350	615	372	420.00	20
Totals	10	8,431	14,021	20,636	11,209	10,492.33	3,908
From East Coast of United States to Australasia.							
British	7	31,157	37,323	45,215	28,511	38,674.70	53,200
United States	1	5,153	6,603	7,981	5,164	6,441.25	6,500
Japanese	1	4,375	4,389	5,864	4,259	5,266.80	5,921
Totals	9	40,685	48,315	59,060	37,934	50,382.75	65,621
From Europe to Australasia:							
British	7	37,177	45,892	57,924	36,146	46,471.25	31,792
Swedish	1	3,468	5,346	5,788	4,300	4,335.00	.....
Totals	8	40,645	51,238	63,712	40,446	50,806.25	31,792
From East Coast of Mexico to West Coast of South America:							
Norwegian	3	13,332	15,269	20,970	13,278	16,665.00	28,000
United States	2	8,213	10,508	13,006	7,935	10,266.25	18,368
Totals	5	21,545	25,777	33,976	21,213	26,931.25	46,368
From Europe to West Coast of United States:							
United States	3	13,052	16,107	19,528	13,009	16,315.00	9,573
Danish	1	4,567	4,618	5,973	4,585	3,425.25	.....
British	1	3,580	3,981	4,995	3,214	4,475.00	711
Totals	5	21,199	24,706	30,496	20,808	24,215.25	10,284
From Europe to West Coast of Canada:							
British	3	6,936	9,110	11,231	6,858	7,716.81	5,413
From East Coast of South America to West Coast of United States:							
Norwegian	2	3,179	3,553	4,770	3,157	2,583.78	.....
United States	1	3,034	4,174	2,925	4,174	3,792.50	6,032
Totals	3	6,213	7,727	7,695	7,331	6,376.28	6,032

ATLANTIC TO PACIFIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From Cristobal to West Coast of United States:							*Long tons.*
United States	3	5,149	6,215	8,200	5,126	$6,436.25	1,664
From Mexico to West Coast of United States:							
United States	2	9,169	10,903	14,619	9,169	11,461.25	20,500
From West Indies to Far East:							
Japanese	2	7,447	8,289	10,593	7,332	9,308.75	14,145
From Canada to Australasia:							
British	2	6,933	9,532	11,374	7,063	8,666.25	9,150
From East Coast of South America to West Coast of South America:							
Norwegian	1	1,507	1,479	1,493	873	1,774.80	108
British	1	614	622	1,138	602	746.40	531
Totals	2	2,121	2,101	2,631	1,475	2,521.20	639
From Cristobal to Central America:							
British	2	1,441	1,610	2,689	1,459	1,801.25	1,067
From West Indies to Australasia:							
British	1	2,821	3,385	4,506	2,815	3,526.25	5,780
From East Coast of United States to West Coast of Canada:							
United States	1	2,794	3,047	4,230	2,656	3,492.50	5,670
From East Coast of United States to Balboa, C. Z.:							
United States	1	4,453	5,319	7,217	4,453	5,566.25	10,000
From East Coast of Mexico to Far East:							
British	1	8,309	9,609	13,056	8,335	10,386.25	16,117
From East Coast of United States to Tahiti:							
British	1	400	422	562	519	500.00	600
Grand totals	118	397,568	492,506	615,818	391,141	490,505.91	500,801
March, 1921	140	514,468	613,591	784,748	506,842	636,165.10	636,579
April, 1920	110	341,330	407,968	521,017	338,932	399,716.09	398,568

PACIFIC TO ATLANTIC.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From West Coast of South America to East Coast of United States:							*Long tons.*
United States	8	18,987	23,878	31,586	19,107	$21,933.30	18,271
British	8	24,267	30,034	40,119	24,664	27,321.53	27,569
Japanese	4	13,289	15,744	20,173	13,079	16,431.65	27,838
Norwegian	2	4,759	6,455	7,535	4,713	5,948.75	12,442
Dutch	1	3,320	5,466	5,248	3,762	4,150.00	3,700
Danish	1	1,523	1,492	1,955	1,208	1,790.40	945
Totals	24	66,145	83,069	106,616	66,533	77,575.63	90,765
United States coastwise:							
United States	14	54,674	68,368	88,440	54,378	65,523.74	59,306
From Australasia to Europe:							
British	11	63,472	74,912	87,987	56,047	78,405.85	60,549
Danish	1	5,457	6,874	8,597	5,469	6,815.00	9,143
Totals	12	68,929	81,786	96,584	61,516	85,220.85	69,692
From West Coast of South America to Europe:							
British	4	21,422	24,375	31,927	19,816	26,455.00	30,871
French	2	6,881	7,907	10,857	6,951	8,601.25	11,620
Italian	1	4,495	4,659	5,940	3,905	5,590.80	800
Japanese	1	3,429	4,286	5,443	3,417	4,286.25	7,616
Russian	1	3,375	3,940	5,236	2,398	4,218.75	6,119
Finnish	1	2,031	2,025	2,215	2,070	2,430.00	3,490
Totals	10	41,633	47,192	61,618	38,557	51,582.05	60,516
From West Coast of South America to Cristobal:							
British	7	4,880	8,150	10,433	5,820	6,100.00	1,124
Peruvian	2	2,719	5,345	9,020	4,517	3,398.75	4,163
Chilean	1	1,811	3,182	3,798	2,272	2,263.75	69
Totals	10	9,410	16,677	23,251	12,609	11,762.50	5,356

PACIFIC TO ATLANTIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From West Coast of United States to Europe:							*Long tons.*
United States	5	17,567	24,039	28,890	18,542	$21,958.75	38,272
Danish	1	5,191	5,663	6,913	5,218	6,488.75	8,916
French	1	2,264	2,933	3,563	2,293	2,830.00	4,833
Swedish	1	2,248	4,089	3,767	2,865	2,810.00	6,000
Norwegian	1	2,237	3,767	3,660	2,221	2,796.25	5,742
Totals	9	29,507	40,491	46,793	31,139	36,883.75	63,763
From Far East to East Coast of United States:							
Japanese	4	17,496	20,514	27,401	16,871	21,870.00	9,103
United States	1	3,423	4,401	5,784	3,513	4,278.75	2,200
British	1	3,301	4,841	5,176	3,344	3,485.52	.....
Totals	6	24,220	29,756	38,361	23,728	29,634.27	11,303
From West Coast of United States to East Coast of Mexico:							
United States	5	23,282	26,880	36,495	22,749	21,117.15	955
From West Coast of South America to East Coast of Mexico:							
United States	2	8,485	10,822	13,534	8,406	7,791.84	.....
Norwegian	2	8,881	10,203	13,982	8,838	7,346.16	.....
Totals	4	17,366	21,025	27,516	17,244	15,138.00	.....
From West Coast of Canada to Europe:							
United States	2	7,326	10,199	11,774	7,287	9,157.50	13,366
Dutch	1	4,860	6,068	7,651	4,796	6,075.00	9,461
Totals	3	12,186	16,267	19,425	12,083	15,232.50	22,827
From West Coast of United States to Cristobal:							
United States	2	2,986	3,756	4,796	2,963	3,732.50	1,994
From West Coast of Central America to Cristobal:							
British	2	1,441	1,610	2,689	1,459	1,801.25	940
From West Coast of Canada to East Coast of Mexico:							
United States	1	5,489	5,429	6,883	5,268	4,116.75	.....
From Balboa, C. Z., to East Coast of United States:							
United States	1	4,453	5,319	7,217	4,452	3,829.68	.....
From Australasia to New York:							
United States	1	3,779	4,774	6,077	3,730	4,723.75	5,420
From West Coast of Canada to East Coast of United States:							
United States	1	3,450	5,495	5,687	3,450	4,312.50	6,876
From Tahiti to Europe:							
Danish	1	3,037	3,473	4,945	3,018	3,796.25	6,752
Colombian coastwise:							
British	1	614	622	1,138	602	746.40	347
From West Coast of Central America to East Coast of United States:							
United States	1	530	530	701	530	397.50	.....
Local—Balboa to Cristobal:							
United States	1	417	478	2,037	427	344.16	.....
Grand totals	109	373,548	462,997	587,269	366,435	437,471.18	406,812
March, 1921	115	409,841	499,227	632,472	410,599	470,371.45	447,984
April, 1920	110	340,328	414,503	529,464	335,633	405,855.41	468,953

Bunkers at Barbados.

The American Consul at Barbados reports that on April 4, 1921, 15,500 tons of coal were available at Bridgetown for bunkering, which is an ample stock for present needs. The price is £4 10d per ton, trimmed, payable at the current rate ruling in New York for sight drafts on London on the day of payment.

The British Union Oil Company has erected a steel oil tank of 55,000 barrels capacity and another tank of the same capacity is under construction.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended May 7:

Spanish cruiser *España*, docking, cleaning and painting bottom; repairing hull forward where damaged through grounding; miscellaneous minor repairs to hull and engineer's departments, consisting of repairs to drains and vent and sounding pipes in engine rooms; overhauling various pumps, renewing suction and discharge lines to circulators; repairing ash hoist trunk, renewing discharge pipes on ash ejectors; manufacturing evaporator coils; manufacturing one boat boom, repairing and rerivet-ing torpedo net platform and renewing miscellaneous eye pads and ring bolts on deck; examining rudder; overhauling sea valves and zincs on hull; steamships *Tregantle*, docking, cleaning, and painting bottom; renewing stem and 9 frames port and starboard; repairing and renewing plates back to No. 10 frame to upper 'tween deck level; repairing one broken anchor and overhauling anchor cables; repairing cracked hawse pipe; all of the above being result of collision at sea; *Azov*, docking, staging, and cleaning, painting bottom, grinding in sea valves; repacking cargo tank valves; calking cargo tank and bunker bulkheads where necessary; examining tail shaft; renewing main engine rocker shaft brasses; overhauling air deflectors in furnace fronts; miscellaneous valve work on steam lines and service pumps; and miscellaneous deck work; *Lady Sybil*, docking, staging, and cleaning, scaling and painting bottom; renewing bilge cover boards in No. 2 hold; renewing approximately 20 feet of fender, port, forward end; annealing steering chains, and performing other miscellaneous deck-department repairs; renewing brickwork in boilers where necessary; removing old and installing new donkey boiler; patching and renewing boiler jacket-lagging, and lagging and jacketing new donkey boiler; renewing seats on direct-connected bilge pumps; repairing anchor windlass; launch *Vacuum, Jr.*, repairing damaged bow, renewing floor and hatch covers and reinstalling engine; barge *No. 201*, renewing plates, fenders, and deck on one corner where damaged; rebuilding stanchions on roof; barge *No. 137*, docking, staging, cleaning, and painting bottom; cleaning and painting inside and out; renewing hopper sheathing and strongback sheathing, and rebuilding strongbacks and A frames; overhauling operating gear; launch *Coco Solo*, renewing stem, repairing monkey rails and repairing copper sheathing; tug *Miraflores*, docking, cleaning, and painting bottom, repairing fenders and rail; subchaser *No. 285*, docking, cleaning bottom, patching copper, calking leaks in bottom and recalking deck; steamship *Ansaldo VIII*, manufacturing 10 burner tips; dredge *Cascadas*, repairing master gear on main engine; U. S. S. *Tacoma*, docking, examining tail shaft and propellers; steamships *West Wind*, manufacturing and installing 12 soot blowers; *Caddo*, overhauling throttle valve and air pump; launch *Chilibre*, repairing copper on hull; repairing rudder; *Orani*, securing astern element in main turbine; truing up buckets and rebabbitting bearings; rebricking port and starboard boilers; *La Habra*, welding oil cylinder and renewing one steam valve in inboard fuel oil pump; renewing broken top pin on bilge pump plungers; miscellaneous deck work.

The following vessels were at the Cristobal shops for repairs during the week ended May 9:

Steamships *Panama*, *General G. W. Goethals*, *Advance*, *Cristobal*, *Ulysses*, miscellaneous repairs and painting to engine, deck, and steward departments; *Manavi*, rebore steam end of Weir's pump; dry-dock, clean, and paint; manufacture and install new funnel, etc.; motor ship *Doewa*, alter crew accommodations; manufacture, fit, and install steel water-tight doors as per plan furnished; examine and repair gravity tank valves, etc.; *Anam*, clean and paint bottom; clean pistons and rings of main engines; examine same and renew as necessary; true up main bearings, etc.; U. S. subchaser *No. 286*, dock and undock; repair hull, etc.; steamships *Caribbean*, *Ucayali*, *Camden*, motor schooner *Laura C. Hall*, steamships *San Jose*, *Ansaldo San Giorgio II*, *Jan van Nassau*, *Salvador*, tug *Osceola*, dredge *No. 86*, launch *Patrol*, minor repairs.

Passengers and Cargo Accepted for Cartagena, Colombia, on Steamship "Caribbean."

The steamship *Caribbean* will accept passengers and cargo for Cartagena, Colombia, sailing at 6 a. m., Sunday morning, May 15. For further particulars inquire at Cattle Industry Office, Cristobal.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight May 7, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Targis	30	21.04	1	6.13	1	13.58	1	14.55	German	Roland Steamship Line	266.0	42.0	15.3	Bremen	Callao	General	711	2,174	1,320
Point Lobos	30	6.53	1	6.14	1	13.52	1	14.55	American	Pacific Mail Steamship Co	289.0	44.0	19.6	Baltimore	San Francisco	(4)	2,700	2,895	1,967
W. S. Miller	1	5.00	1	7.10	1	15.15	1	16.15	American	Standard Oil Co	435.0	56.2	27.5	Baton Rouge	Seattle	Gasoline	8,800	7,440	5,045
Lehigh	1	6.37	1	9.45	1	16.58	1	18.05	American	North Atl. & West. Co. (S. B.)	390.0	54.2	17.6	Boston	Seattle	General	1,718	6,106	4,346
Ottar	30	23.45	1	10.51	1	18.02	1	19.20	Norwegian	Jorgen C. Knudsen	262.6	37.0	13.3	New York	Guayaquil	General	48	1,815	1,222
Minnequa	1	11.22	1	11.40	1	18.54	2	12.51	American	Wessel Duval & Co. (S. B.)	390.0	54.2	20.8	New York	Talcahuano	General	3,088½	6,106	4,355
America[2]	28	11.15	1	9.45	1	12.58	.....	.....	American	J. H. Stilson	.....	.....	.....	Cristobal	Gatun Lake	Ballast	.....	6	6
Arizonian	1	13.55	2	6.20	2	13.13	2	14.25	American	American-Hawaiian Line	484.0	57.2	23.0	Boston	Los Angeles	General	3,378	9,158	6,970
Liberator	1	15.00	2	6.25	2	14.00	2	15.00	American	Atl. Gulf. & Pacific S. S. Co	428.0	56.0	23.8	Baltimore	Los Angeles	General	6,000	8,199	6,250
Montebello	1	19.24	2	6.50	2	18.30	2	20.02	American	Union Oil Co	440.4	58.2	29.1	Puerto Lobos	Los Angeles	Crude oil	11,000	8,844	5,842
Victoria	1	6.45	2	11.15	2	18.36	2	20.03	British	Pacific Steam Navigation Co	401.4	52.3	21.7	Liverpool	Valparaiso	General	1,397	6,887	4,575
Fionia[2]	2	2.55	3	6.07	3	13.05	3	14.00	Danish	Danish East Asiatic Co	395.0	53.0	23.0	Antwerp	Los Angeles	General	2,955	5,744	4,016
City of Vancouver	3	7.12	3	7.50	3	16.13	3	17.17	British	Canadian Western S. S. Co	411.0	54.0	14.0	Emden	Vancouver	Ballast	.....	6,614	4,995
West Wind	27	21.31	3	8.10	3	19.12	.....	.....	American	U. S. & A. Line (S. B.)	410.0	54.0	24.0	New York	Auckland	General	6,500	6,613	4,943
Sciota[3]	19	15.53	3	10.15	3	16.00	.....	.....	American	United States Navy	.....	.....	.....	Cristobal	Balboa	.....	.....	.....	.....
Bellflower	3	13.02	4	6.13	4	15.15	4	19.08	American	Barber Steamship Line (S. B.)	395.5	55.0	26.0	New York	Kobe	Kerosene	7,238	6,841	4,686
Guatemala	25	18.07	4	6.20	4	13.27	4	14.50	British	Pacific Steam Navigation Co	359.3	43.0	18.3	Cristobal	Valparaiso	General	435	4,210	2,744
Tacoma Maru	4	5.45	4	6.42	4	15.20	4	16.15	Japanese	Osaka Shosen Kaisha	410.0	51.0	22.0	Galveston	Kobe	General	3,651	6,146	4,241
Ansaldo VIII	3	15.23	4	7.50	4	16.32	5	8.15	Italian	Societa Nazionale di Navigazione	378.5	51.5	18.0	Genoa	Valparaiso	General	2,236	5,521	3,599
Gen. H. F. Hodges	2	5.30	4	11.06	4	17.30	5	7.03	American	Panama Railroad Steamship Line	323.5	39.0	14.8	New York	Guayaquil	General	551	3,013	1,574
Willfaro	4	22.15	5	6.35	5	14.31	5	15.33	American	Williams Steamship Co	386.8	52.2	22.0	New York	Los Angeles	General	4,564	5,680	4,162
Azumasan Maru	5	19.15	6	6.10	6	14.07	6	15.30	Japanese	Kyoto Kisen Kaisha	360.0	48.0	20.9	New York	Shanghai	General	3,101	4,666	3,397
Quilpue	4	7.47	6	6.10	6	14.42	6	15.50	British	Pacific Steam Navigation Co	361.2	46.0	18.0	New York	Guayaquil	General	119	4,742	3,023
Breakwater	5	19.45	6	6.11	6	15.37	.....	.....	American	Panama Construction Co	102.7	24.0	11.0	Cristobal	Balboa	Ballast	.....	237	118
Lake Gunni	6	6.35	6	7.05	6	14.56	7	20.00	American	Swayne & Hoyt (S. B.)	253.0	43.0	18.0	New Orleans	Los Angeles	General	2,386	2,915	2,005
Kaikoura	6	6.45	6	8.00	6	15.40	6	16.40	British	New Zealand Shipping Co	460.0	58.0	26.0	London	Auckland	General	4,800	9,057	6,438
America[2]	5	13.56	6	6.00	6	10.02	.....	.....	American	J. H. Stilson	.....	.....	.....	Cristobal	Gatun Lake	.....	.....	6	6
Essequibo	6	13.05	7	6.04	7	12.55	7	14.58	British	Pacific Steam Navigation Co	450.0	57.0	24.0	New York	Valparaiso	General	1,900	9,037	6,089
Ansaldo San Giorgio II	6	6.50	7	6.11	7	13.51	8	16.20	Italian	Societa Nazionale di Navigazione	392.0	52.0	15.7	Genoa	Valparaiso	General	700	5,902	4,287
Howick Hall	6	18.58	7	6.37	7	15.36	7	16.46	American	United States Steel Products Co.	400.8	51.5	26.0	New Orleans	Yokohama	(5)	6,692	6,095	4,381
Spectator	6	20.03	7	7.55	7	15.58	7	17.02	British	Harrison Line	384.7	50.0	20.7	London	Seattle	General	3,500	.....	.....

[2] Launch. [3] Motor ship. [4] Tug. [4] Pipe, steel, and general. [5] Cotton, steel, and general.

Santa Tecla	6	20.16	7	8.20	7	16.50	7	17.55	American	W. R. Grace & Co.	298.6	40.0	20.0	New York	Callao	General	1,755	2,835	1,827
Borgland	7	6.37	7	9.25	7	17.12	8	23.15	Norwegian	Peter Olsen	362.0	51.6	18.0	Antwerp	San Francisco	General	1,629	5,274	3,886
Laura C. Hall [6]	6	15.19	7	9.43	7	19.20	9	11.10	British	Pacific Metals Corporation	81.0	25.6	9.0	Cristobal	Buenaventura	Ballast	.....	130	69
Otaki	7	7.48	7	11.05	7	19.40	7	19.40	British	New Zealand Shipping Co.	449.0	58.0	29.3	New York	Auckland	General	6,500	8,256	5,470
Tairoa	7	2.20	7	12.36	7	20.50	7	21.51	British	Shaw, Saville & Albion Co.	477.0	62.9	26.6	Liverpool	Auckland	General	2,964	11,192	8,149

[6] Motor schooner.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Seminole	30	22.30	1	7.56	1	15.45	1	15.45	American	Tampa-Inter-Ocean S. S. Co. S. B.	401.9	54.2	27.6	Coquimbo	Baltimore	Iron ore	8,000	6,906	5,011
Salvador	1	17,30	2	6.22	2	15.30	....	.....	British	Pacific Steam Navigation Co.	215.0	33.0	15.9	Champerico	Cristobal	(7)	1,029	1,213	692
Benjamin Brewster	1	21.30	2	6.55	2	15.17	2	23.40	American	Standard Oil Co. of N. J.	411.6	53.4	22.0	Junin Cove	Tampico	Ballast	.....	6,360	4,337
Quillota	1	18.00	2	7.27	2	16.15	4	6.10	British	Pacific Steam Navigation Co.	361.4	46.2	18.6	Guayaquil	New York	General	1,581	4,768	2,956
West Notus	1	20.30	2	8.09	2	16.50	2	16.50	American	Swayne & Hoyt (S. B.)	401.5	54.3	21.6	Tacoma	Ponce	Lumber, general	5,351	6,582	4,913
Kiyo Maru	17	9.50	2	10.30	2	18.00	2	18.00	Japanese	Toyo Kisen Kaisha	470.0	56.5	20.0	Valparaiso	Tampico	Ballast	.....	9,146	6,385
Canadian Prospector	2	10.25	2	12.21	2	20.40	3	14.27	British	Canadian Government	399.3	52.4	23.1	Chamenus	Alexandria	Lumber	5,090	5,858	4,033
Alaskan	1	19.30	2	14.27	2	23.20	2	23.20	American	American-Hawaiian Line	470.1	57.2	28.6	Hilo	New Orleans	Sugar	12,000	9,250	6,901
Advance	3	1.15	3	7.25	3	23.00	5	15.00	American	Panama Railroad Steamship Line	295.0	38.4	18.6	Guayaquil	New York	General	1,618	2,947	2,113
Normanstar	2	23.30	3	8.05	3	16.15	3	22.00	British	Blue Star Line	415.0	56.0	24.0	Whatakane	United King.	(8)	3,411	7,517	5,458
Zealandic	3	11.40	3	12.25	3	20.40	4	13.02	British	White Star Line	477.0	63.1	26.0	Wellington	London	(8)	6,094	11,754	8,452
Sarpfos	5	1.30	5	7.58	5	14.45	6	6.16	Norwegian	Thor. Thoresen Line	254.8	39.2	14.3	Guayaquil	New York	(9)	1,083	2,064	1,479
Colorado Springs	5	7.15	5	9.21	5	18.20	6	6.45	American	Sudden & Christensen (S. B.)	409.6	54.2	27.1	Portland	Leghorn, Italy	Wheat	7,700	7,490	5,721
Elder Branch	5	9.00	5	10.00	5	17.20	5	21.45	British	Nautilus Steamship Co.	380.3	49.7	26.0	Punta Arenas	Liverpool	General	6,248	4,965	3,653
San Jose	4	17.20	5	13.23	5	20.17	....	.....	American	Pacific Mail Steamship Co.	283.0	37.0	17.5	San Francisco	Cristobal	General	1,515	2,352	1,602
Tregantle	4–6	11.25	6	6.37	6	14.38	6	19.20	British	Hain Steamship Co.	400.2	52.1	24.1	Valparaiso	France	General	6,168	6,035	4,610
Laura C. Hall	5	9.30	6	6.38	6	15.19	7	9.43	British	Pacific Metals Corporation	81.0	25.6	9.0	Buenaventura	Cristobal	Platinum	(10)	130	69
Caddo	3	20.00	6	6.50	6	15.03	6	15.03	American	Standard Oil Co. of N. J.	417.5	55.2	20.0	San Francisco	Tampico	Ballast	.....	6,437	4,297
Chile	5	23.30	6	7.37	6	16.00	....	.....	British	Pacific Steam Navigation Co.	350.3	43.1	16.6	Valparaiso	Cristobal	General	109	4,064	2,668
Bratsberg	6	13.20	6	14.05	6	21.21	6	21.47	Norwegian	Borgestad Co.	345.9	49.6	19.0	Antofagasta	New York	Copper, etc.	3,300	4,262	3,042
La Habra	4	0.01	7	6.34	7	16.49	7	16.59	Norwegian	Wilhem Wilhelmsen	424.8	57.0	17.0	Antofagasta	Tampico	Ballast	.....	7,053	5,051
Pleiades	6	22.30	7	7.39	7	17.41	7	17.45	American	Luckenbach Line	331.5	47.0	21.0	San Francisco	New York	General	3,700	4,147	3,259
Rimutaka	7	12.25	7	13.24	7	22.15	8	10.10	British	New Zealand Shipping Co.	457.2	58.2	22.6	Auckland	London	(8)	5,225	9,124	6,848
Ucayali	7	13.30	7	14.40	7	23.00	....	.....	Peruvian	Peruvian Steamship Co.	374.4	46.3	23.0	Callao	Cristobal	General	2,355	4,465	2,405

[7] Coffee, sugar, lard, etc. [8] Cold storage and general. [9] Cacao, coffee, ivory nuts, and hides. [10] Value $47,100.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
May 1	Metapan	United Fruit Co.	New Orleans and way-ports.
May 1	Teviot	Pacific Steam Navigation Co.	London.
May 2	Abangarez	United Fruit Co.	New Orleans.
May 3	Calamares	United Fruit Co.	New York via Habana.

*DEPARTURES.

Date.	Vessel.	Line.	For—
May 1	Gen. W. C. Gorgas	Panama Railroad Steamship Line	New York via Haiti.
May 1	Metapan	United Fruit Co.	Bocas del Toro.
May 3	La Navarre	French Line	Puerto Colombia.
May 3	Centurion	Harrison Line	Trinidad.
May 4	Cristobal	Panama Railroad Steamship Line	Norfolk.

(Continued on page 608, column 2.)

Fuel Oil at the Panama Canal.

Three steel tanks of 55,000 barrels capacity each were added to the petroleum storage facilities at the Atlantic entrance to the Canal in the month of April; and a fourth tank of the same capacity has been completed but is not yet filled. The United Fruit Company, the Arrow Oil Company, and the Pacific Mail Steamship Company each owns one of the three tanks already filled, and the Huasteca Petroleum Company owns that which is completed but not yet filled. The storage capacity at the Canal is now as follows:

	Cristobal.		Balboa.		Total both terminals.	
	No. of tanks.	Aggregate storage.	No. of tanks.	Aggregate storage.	No. of tanks.	Aggregate storage.
The Panama Canal	[1]4	[1]196,587	[2]5	[2]199,781	9	396,368
Panama Canal Storage Corporation	2	110,872	2	110,584	4	221,456
West India Oil Co	2	110,000	2	84,946	4	194,946
Union Oil Co. of California	.....	.....	4	149,078	4	149,078
Huasteca Petroleum Co	3	166,721	.....	.....	3	166,721
The Texas Co	2	111,515	.....	.....	2	111,515
Arrow Oil Co	1	55,000	.....	.....	1	55,000
Pacific Mail Steamship Co	1	55,000	.....	.....	1	55,000
United Fruit Co	1	55,000	.....	.....	1	55,000
Panama Agencies Co	.....	.....	1	25,064	1	25,064
Total	16	860,695	14	569,453	30	1,430,148

[1] Includes 1 tank of 55,954 barrels used for storage of Diesel oil.
[2] Includes 1 tank of 4,038 barrels used for storage of Diesel oil.

Gasoline storage, in addition to the above, is provided by The Panama Canal with a tank of 5,382 barrels (226,028 gallons) at Cristobal, and a tank of 5,404 barrels (226,976 gallons) at Balboa.

RESUME OF THE BUSINESS.

The Balboa fuel oil plant was first placed in operation on January 28, 1915, and the Mount Hope oil plant began operations on March 8, 1915. Up to June 30, 1915, the Balboa plant handled 730,022 barrels of oil, and the Cristobal plant 134,559 barrels. Details as to the amount sold, consumed by Canal operations, etc., however, are lacking. Beginning July 1, 1915, the operations of both plants, by fiscal years, have been as follows:

	Balboa plant.	Mount Hope plant.	Total.
Number of barrels of fuel oil received by The Panama Canal:			
Fiscal year, 1916	579,389	97,108	676,497
Fiscal year, 1917	673,274	228,160	901,434
Fiscal year, 1918	602,249	70,107	672,356
Fiscal year, 1919	591,001	112,849	703,850
Fiscal year, 1920	426,541	454,628	881,169
Fiscal year, 1921 (to April 30)	493,118	209,085	702,203
Number of barrels of fuel oil used by The Panama Canal:			
Fiscal year, 1916	517,191	108,746	625,937
Fiscal year, 1917	483,793	65,012	548,805
Fiscal year, 1918	321,108	119,297	440,405
Fiscal year, 1919	243,053	64,618	307,671
Fiscal year, 1920	290,376	76,420	366,796
Fiscal year, 1921 (to April 30)	224,904	74,400	299,304
Number of barrels of fuel oil sold by The Panama Canal:			
Fiscal year, 1916	48,427	12,093	60,520
Fiscal year, 1917	52,000	32,849	84,849
Fiscal year, 1918	325,181	49,803	374,984
Fiscal year, 1919	344,330	80,957	425,287
Fiscal year, 1920	269,699	394,376	664,075
Fiscal year, 1921 (to April 30)	175,302	106,623	281,926
Number of barrels of fuel oil pumped for individuals and companies:			
Fiscal year, 1916	800,587	92,578	893,165
Fiscal year, 1917	1,369,999	80,139	1,450,138
Fiscal year, 1918	810,049	121,502	931,551
Fiscal year, 1919	678,558	407,453	1,086,011
Fiscal year, 1920	508,326	3,150,967	3,659,293
Fiscal year, 1921 (to April 30)	1,695,162	2,192,931	3,888,093

	Balboa plant.	Mount Hope plant.	Total.
Number of ships handled, including Panama Canal craft:			
Fiscal year, 1916	262	48	310
Fiscal year, 1917	347	59	406
Fiscal year, 1918	276	162	438
Fiscal year, 1919	248	148	396
Fiscal year, 1920	347	848	1,195

POLICY.

It has been the policy of The Panama Canal to refrain from active competition with individuals and companies in the sale of fuel oil, and the sale price for fuel oil, as fixed by The Panama Canal from time to time, has been for regulating prices rather than to obtain business for the Canal.

Sites for storage tanks have been leased to private individuals and companies, and a suitable price is charged the private companies for pumping their oil and for the use of the plant and pipe lines.

Insurance Companies in the Canal Zone.

Six insurance companies, all American corporations, transacted insurance business in the Canal Zone during 1920. A summary of the business follows:

RECAPITULATION.

MISCELLANEOUS COMPANIES.

	Premiums received in 1920.	Losses paid in 1920.
Accident	$10,299.04	$3,924.21
Fidelity	1,353.13	186.51
Health	532.00	319.29
Liability	4,628.96	853.35
Surety	[1] 3,345.59	.....
Workmen's compensation	29.65	.....
Total	20,188.37	5,283.36

[1] Credit of $241 deducted.

LIFE INSURANCE COMPANIES.

	Number.	Amount.
Policies in force, December 31, 1919	659	$1,375,045.00
Policies issued during 1920	150	458,626.00
Policies lapsed during 1920	81	129,564.00
Policies in force, December 31, 1920	728	1,704,107.00
Losses and claims unpaid, December 31, 1919	1	1,000.00
Losses and claims incurred during 1920	8	16,500.00
Losses and claims settled during 1920	7	15,000.00
Losses and claims unpaid December 31, 1920	2	2,500.00
Premiums collected in 1920	.....	59,258.53

No fire, marine, or tornado insurance companies did business in the Canal Zone in 1920.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending May 7, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Reiyo Maru	Toyo Kisen Kabushiki Kaisha	May 1	May 2	88	.....
Salvador	Pacific Steam Navigation Co	May 1	May 2	1	.....
Quillota	Pacific Steam Navigation Co	May 1	May 2	1	.....
Lady Sybil	International Petroleum Co	May 2	.....	395	.....
Azov	International Petroleum Co	May 3	.....	1,501	.....
Ansaldo VIII	Societa Nazionale di Navigazione	May 4	May 4	64	.....
San Jose	Pacific Mail Steamship Co	May 4	May 5	150	18
Laura C. Hall	Pacific Metals Corporation	May 5	May 6	5	.....
Chile	Pacific Steam Navigation Co	May 5	May 6	2	.....
Ansaldo San Giorgio II	Societa Nazionale di Navigazione	May 7	.....	23	.....
Laura C. Hall	Pacific Metals Corporation	May 7	.....	.....	74

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending May 7, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Gen. W. C. Gorgas	Panama Railroad Steamship Line	.....	May 1	.....	2,713
Point Lobos	Pacific Mail Steamship Co	.....	May 1	.....	284
Victoria	Pacific Steam Navigation Co	May 1	May 2	140	(1)
La Navarre	French Line	.....	May 3	.....	4
Guatemala	Pacific Steam Navigation Co	.....	May 4	.....	452
Teviot	Pacific Steam Navigation Co	May 1	May 6	916	892
Fionia	Danish East Asiatic Co	May 2	May 3	172	32
Quillota	Pacific Steam Navigation Co	May 2	May 4	217	674
Gen. H. F. Hodges	Panama Railroad Steamship Line	May 2	May 4	1,847	(1)
Abangarez	United Fruit Co	May 2	May 5	705	39
Salvador	Pacific Steam Navigation Co	May 2	.....	1,209½	.....
Ansaldo VIII	National Navigation Society	May 3	May 4	67	(1)
Calamares	United Fruit Co	May 3	May 4	240	230
Advance	Panama Railroad Steamship Line	May 3	May 5	48	7
Metapan	United Fruit Co	May 4	May 4	½	½
Tivives	United Fruit Co	May 4	May 5	77	348
Quilpue	Pacific Mail Steamship Co	May 4	May 6	27	(1)
Carrillo	United Fruit Co	May 5	May 5	7	1/5
Sarpfos	Caribbean Steamship Co	May 5	May 6	125	(1)
San Jose	Pacific Mail Steamship Co	May 5	.....	1,515	.....
Jan van Nassau	Royal Netherlands S. S. Line	May 6	.....	45	.....
Ansaldo San Giorgio II	National Navigation Society	May 6	May 7	83	(1)
Essequibo	Pacific Steam Navigation Co	May 6	May 7	25	(1)
Chile	Pacific Steam Navigation Co	May 6	.....	108	.....
Gen. G. W. Goethals	Panama Railroad Steamship Line	May 6	.....	145	.....
Camden	United Fruit Co	May 6	.....	8,918	.....
Panama	Panama Railroad Steamship Line	May 7	.....	1,825	.....
San Mateo	United Fruit Co	May 7	May 7	50	(1)

[1] No cargo laded.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies, including the 25 per cent surcharge, effective May 1, 1921:

Commodities.	Unit.	Price.
Brass, bar, average	Lb.	$0.31
Brass, sheet, average	Lb.	.55
Bronze, Tobin, average	Lb.	.35
Cement, at Panama:		
Including bags and surcharge	Bag	1.66
Credit for empty bags returned	Bag	.15
Cement, at Colon:		
Including bags and surcharge	Bag	1.49
Credit for empty bags returned	Bag	.15
Charcoal	Cwt.	1.63
Gasoline, motor grade	Gal.	.40
Lead, sheet, average	Lb.	.125
Lead, pig	Cwt.	11.68
Lumber, yellow pine or fir, except ceiling	M ft. B. M.	77.50
Lumber, ceiling, siding, and flooring, 1″ x 6″	M ft. B. M.	96 25
Lumber, flooring, 1″ x 3″ and 1″ x 4″	M ft. B. M.	108.75

Lumber, native, prices per 1,000 feet board measure:

Kind.	Rough. Green.	Rough. Kilned.
Almendra	$106 25	$118.75
Alcavu	106.25	118.75
Alcareto	106.25	118.75
Amargo	106.25	118.75
Bateo	62.50	75.00
Cedro Amargo	106.25	118.75
Caoba Blanca	106 25	118.75
Guayacan	137.50	150.00
Maria	62.50	75.00
Roble	62.50	75.00
Nispero	137.50	150.00
Notes:		
1. Second grade Alcavu	.....	87.50
2. Second grade Caoba Blanca	.....	87.50
3. Second grade Cedro Amargo	.....	93.75
4. Other than rough standard native lumber required by individuals and companies will be manufactured by the Mechanical Division for their account.		

Commodities.	Unit.	Price.
Metal, yellow	Lb.	$0.34
Oakum, navy, spun	Lb.	.175
Oakum, navy, unspun	Lb.	.175
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl of 42 gals	2.75
Oil, fuel, at Balboa and Cristobal, in drums or barrels, no surcharge	Bbl of 42 gals	3.00
Oils, greases, and lubricants:		
Oil, air compressor cylinder	Gal.	.51
Oil, ammonia cylinder	Gal.	.51
Oil, burning	Gal.	1.25
Oil, cylinder, dark, marine	Gal.	1.10
Oil, cylinder, ice machine, steam	Gal.	.91
Oil, dynamo	Gal.	.775
Oil, engine, in tins	Gal.	.675
Oil, engine, in barrels	Gal.	.49
Oil, gas, engine, in barrels	Gal.	1.04
Oil, gas, engine, heavy, in cases	Gal.	1.125
Oil, gas, engine, medium, in drums	Gal.	.65
Oil, kerosene, in drums	Gal.	.375
Oil, kerosene, in tins	Gal.	.40
Oil, linseed, boiled	Gal.	2.225
Oil, linseed, raw	Gal.	1.61
Oil, locomotive engine	Gal.	.34
Oil, lard	Gal.	1.925
Oil, marine engine	Gal.	1.04
Oil, marine engine	Gal.	.59
Oil, marine engine	Gal.	.89
Oil, marine engine	Gal.	.99
Oil, mineral seal	Gal.	.35
Oil, nonliquid	Lb.	.075
Oil, stationary engine	Gal.	.50
Oil, sperm	Gal.	2.61
Oil, gas engine, motor, heavy	Gal.	.475
Oil, signal	Gal.	1.24
Oil, valve	Gal.	.46
Oil, car	Gal.	.21
Grease, gear, black	Lb.	.06
Grease, yellow, cup, No. 3	Lb.	.11
Grease, yellow, cup, No. 5	Lb.	.11
Grease, rod, special	Lb.	.225
Grease, tunnel bearing	Lb.	.19
Tallow	Lb.	.24
Turpentine	Gal.	2.26
Turpentine, substitute	Gal.	.725
Vaseline	Lb.	.15
Paint, lead, white, dry	Lb.	.14
Paint, lead, white, in oil	Lb.	.16
Paint, zinc, white, dry	Lb.	.20
Paint, zinc, white, in oil	Lb.	.20
Paint, zinc, white, leaded, 35 per cent in oil	Lb.	.16
Rope, manila, ½″ diameter	C. ft.	.59
Rope, manila, ¾″ diameter	C. ft.	1.175
Rope, manila, ⅝″ diameter	C. ft.	2.20
Rope, manila, ⅞″ diameter	C. ft.	3.64
Rope, manila, ¾″ diameter	C. ft.	4.69
Rope, manila, ⅞″ diameter	C. ft.	6.19
Rope, manila, 1″ diameter	C. ft.	7.78
Rope, manila, 1¼″ diameter	C. ft.	12.21
Rope, manila, 1½″ diameter	C. ft.	17.51
Rope, manila, 1¾″ diameter	C. ft.	25.83
Rope, manila, 2″ diameter	C. ft.	30.90
Rope, manila, 2½″ diameter	C. ft.	49.35
Rope, manila, 3″ diameter	C. ft.	67.53
Rope, manila, 3½″ diameter	C. ft.	91.15
Rope, manila, 4″ diameter	C. ft.	111.43
Soap, laundry	Lb.	.125
Soda, ash	Lb.	.04
Waste, colored	Lb.	.25
Waste, white	Lb.	.25
Zinc, boiler plate, ⅜″ x 6″ x 12″	Lb.	.15

Removal of Washington Office, The Panama Canal.

In accordance with instructions issued by the Public Building Commission, which has full control over all Government owned and rented buildings in the District of Columbia, the Washington Office of The Panama Canal has removed from its old quarters at the Mills Building, 1709 G Street, N. W., to quarters assigned in the Old Land Office Building, 7th and E Streets, N. W. Employees going on leave, who contemplate calling at the Washington Office, should bear this in mind.

Vacations in Costa Rica.

The United Fruit Company has arranged for a special rate between Cristobal, C. Z., and Limon, C. R., to encourage the taking of vacations in Costa Rica by Canal employees. The General Agent of that Company at Cristobal, in letter of May 3, 1921, advises as follows:

I now take pleasure in advising that I am in receipt of a letter from our passenger traffic manager authorizing a round-trip fare between Cristobal and Limon of $30. This rate applies only to employees of The Panama Canal and Panama Railroad Company and their families and is applicable only when the employee is on vacation leave. To obtain this reduction an employee must present us the regular application for reduced rate as is now issued in connection with reduced rates to New York and New Orleans. This reduced-rate request should show the time limit of the employee's vacation, as we have been instructed to limit the return trip to 10 days in addition to the period of the passenger's vacation.

As you no doubt know, we have a sailing from Cristobal to Limon every Wednesday and, as this service is taken care of by our large steamers, we expect to be in a position to accommodate a large number of employees to Limon. In regard to our return service I wish to advise that we have a sailing every week from Limon to Cristobal, leaving Limon Friday evening. This service is taken care of by our "San" type ships and by the steamers of the Elders & Fyffes. As the former type of steamers have limited cabin accommodations it is suggested that passengers so arrange their return trip as to connect with one of the Elders & Fyffes ships. This return service alternates with the "San" type and the Elders & Fyffes. For example, one of the "San" boats will leave Limon this coming Friday and on the following Friday it will be one of the Elders & Fyffes steamers.

Colored Dentist at La Boca.

A new colored district dentist has been appointed with office at La Boca, and his office was opened for business on Monday, May 9.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z. (telephone 286):

Addressograph mechanic, $1,440 a year (male and female); form 1800; announcement No. 238; age, 18 but not 50 years; vacancies exist in the Rehabilitation Division, Federal Board for Vocational Education, Washington, D. C.; May 31, 1921.[1]

Agricultural statistician, $2,000 to $3,600 a year; junior agricultural statistician, $1,800 to $2,250 a year; No. 209-amendment; date of examination changed from May 11 to May 25 and 26, 1921.

Lockmaker, $4.79 per diem (male and female); form 1800; announcement No. 236; age, 20 but not 50 years; vacancies exist in the equipment shops of the Post Office Department; May 31, 1921.[1]

Rodman and chainman; No. 378-supplemental; closing date changed to May 3, 1921.

Scientific assistant in marketing, $1,320 to $1,620 a year (male and female); form 1312; announcement No. 233; age, 20 but not 55 years; vacancies exist in the Bureau of Markets, Department of Agriculture; June 8–9, 1921.

[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that day.

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings, or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Edward Boyce	34590	Barbados	Red Tank	Supply Department	April 30, 1921.
Tobias Prince	56439	Grenada	Panama	Mechanical Division	April 26, 1921.
Henry Williams	43015	Barbados	Red Tank	Pacific Locks	May 2, 1921.
Esau Grant	55485	Jamaica	Colon	Supply Department	April 23, 1921.
Mearl J. Tuttle	3015	United States	Pedro Miguel	Dredging Division	May 4, 1921.

Official Circulars.

Target Practice—Danger.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 4, 1921.

To all concerned—Supplementing circular of April 16, 1921, there is quoted the following letter, dated May 3, 1921, from the Commanding Officer, 33d Infantry:

"With reference to letter from this command, dated April 14, 1921, I may now inform you that the danger zone for firing on rifle range will be extended on Thursday morning, May 5, and that the danger zone is defined as follows:

"An area bounded on the west by Fort Clayton-Pedro Miguel Road, to junction of old Empire-Corozal Road, thence due north, on the south by a line drawn from north end on non-commissioned officers' quarters to bridge on old Empire-Corozal Road (east of Fort Clayton), this line turning due east, and following course of Rio dos Bocas. The northern and eastern boundaries, the perimeter of a circle whose radius is 3 miles and whose center is on old Empire-Corozal Road, due east of Fort Clayton."

Attention is called to the extension of the danger zone mentioned above and employees are again cautioned to remain away from same during the hours of rifle practice.

JAY J. MORROW,
Governor.

Executive Order.—Vehicle Regulations.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 5, 1921.

CIRCULAR NO. 601-120:

The Executive Order quoted below is published for the information of all concerned.

JAY J. MORROW,
Governor.

RELATING to Licensing of Vehicles, Road Rules, use of Lights, Tags, and Signals, and Speed Regulations in the Canal Zone.

By virtue of the Act of Congress entitled "An Act extending certain privileges of Canal employees to other officials on the Canal Zone and authorizing the President to make rules and regulations affecting health, sanitation, quarantine, taxation, public roads, self-propelled vehicles, and policepowers on the Canal Zone, and for other purposes, including provision as to certain fees, money orders, and interest deposits," approved August 21, 1916, I hereby establish the following Executive Order for the Canal Zone:

Section 1. The Governor of The Panama Canal is hereby authorized to promulgate rules and regulations from time to time to carry out this Order.

Sec. 2. The term "motor vehicle," as used herein, shall apply to and include every vehicle which may be drawn or propelled by means of steam, gas, naphtha, fluid, electricity, or other similar motor power: *Provided*, That when a bicycle is equipped with a contrivance commonly known as a motor wheel, such bicycle shall be deemed a motorcycle and included in the term "motor vehicle."

Sec. 3. The term "vehicle," as used herein, shall apply to and include equestrians, horses led, and everything on wheels or runners, whether propelled by man, animal, or mechanical energy, except street cars, baby carriages, roller skates, and coasters.

Sec. 4. The term "public notice," as used herein shall apply to and include every form of order issued by the Governor of The Panama Canal, agreeably to the provisions of this Order, whether such order be printed and published in circular, bulletin, or poster, or indicated by signs or printing placed on or along the roads and streets of the Canal Zone.

Sec. 5. There shall be collected on vehicles owned by residents of the Canal Zone and operated therein, an annual license fee as follows:

For each passenger automobile for personal use only, five dollars ($5).

For each automobile of twenty-nine horsepower, or less, used for carrying passengers for hire twenty dollars ($20).

For each automobile of more than twenty-nine horsepower, used for carrying passengers for hire, thirty dollars ($30).

For each truck or omnibus of 1-ton capacity or less, twenty dollars ($20).

For each truck or omnibus of a capacity of more than 1 ton but less than 3 tons, thirty dollars ($30).

For each truck or omnibus of a capacity of 3 tons or more, forty dollars ($40).

For each motorcycle, two dollars ($2).

For each bicycle, one dollar ($1).

For each animal-drawn vehicle employed in the transportation of passengers for hire, twelve dollars ($12).

For each animal-drawn vehicle employed in the transportation of freight, merchandise or other property, or employed by any merchant in the transportation of any merchandise; twenty dollars ($20) for each 2-wheeled vehicle; and thirty dollars ($30) for each 4-wheeled vehicle.

A 30-day vehicle license will be issued for a fee of 50 cents United States currency to a *bona fide* tourist in the Canal Zone who has brought his own vehicle with him, providing the machine carries a current license plate of some State of the United States. In such cases the United States tag will suffice, and no Canal Zone tag will be issued.

In case of a dispute as to the horsepower or capacity of a vehicle, the issue shall be referred to the Board of Local Inspectors, and the decision of the Board thereon shall be final.

License fees shall be paid for the calendar year; but if any part of the calendar year shall have expired when the license is taken out, then the license fee to be paid shall be proportioned, on a quarterly basis, to the part of the calendar year remaining, including therein the calendar quarter in which the license is paid; but the Governor shall have authority to issue license at rates proportionate to the rates in the above schedule, in such special cases as he may deem proper.

Licenses heretofore issued shall continue in force, and the licensees shall not be required to pay fees hereunder until the licenses previously issued to them shall have expired.

Sec. 6. Before any vehicle mentioned in Section 5 shall be used and operated in the Canal Zone, such vehicle shall be licensed to do so by the Executive Secretary, or the official acting under his authority.

Sec. 7. Except as to the requirements for payment of license fee provided in Section 5, this Order shall apply to and include all vehicles owned and operated by the United States Government, The Panama Canal, and the Republic of Panama.

Sec. 8. Vehicles owned by residents of the Republic of Panama and operated in the Canal Zone, shall pay the same annual license fee as is imposed by the Republic of Panama on vehicles owned by residents of the Canal Zone and operated in the Republic of Panama; *Provided*, That the Governor of The Panama Canal may enter into arrangements with the authorities of the Republic of Panama by which any class or classes of vehicles owned by residents of the Canal Zone and operated in the Republic of Panama may be exempted from the payment of license fees in the Republic of Panama, or required to pay fees at a reduced rate, and any class or classes of vehicles owned by residents of the Republic of Panama and operated in the Canal Zone may be exempted from the payment of license fees in the Canal Zone, or required to pay fees at a reduced rate.

Sec. 9. Whenever any vehicle licensed in the Canal Zone shall, before the period for which the license is taken expires, be sold or transferred by the licensee to some other person who may desire to continue the use and operation of such vehicle over the streets and roads of the Canal Zone, such transferee, within 10 days after such

sale or transfer, by application to the Executive Secretary, or the official acting under his authority and upon submission of satisfactory evidence of such purchase or transfer, shall have the license transferred to him by endorsement thereon by the Executive Secretary, or the official acting under his authority, authorizing such transferee to operate such vehicle under such license, without the payment of any additional charge or fee.

Sec. 10. The Governor of The Panama Canal is hereby authorized to exempt from the payment of license fees hereunder vehicles operated exclusively within certain areas or districts of the Canal Zone to be defined by him, and the Governor is also authorized by public notice to prohibit vehicles of any or all kinds from operating on such portions of the roads and streets in the Canal Zone as he may designate, when, in his judgment, the public interest requires it; or he may permit any of said vehicles to be operated in any areas or districts designated by him, upon such conditions as he may deem necessary and convenient for the welfare of The Panama Canal; and, for the purposes of this Order, the Governor is also authorized to define by public notice the limits of towns and villages in the Canal Zone; *Provided*, That the authority herein granted the Governor to define by public notice the limits of towns and villages shall not be construed or interpreted to in any wise amend or modify the provisions of the Executive Order of March 12, 1914, relative to the designations and boundaries of towns in the Canal Zone.

Sec. 11. Each motor vehicle and bicycle issued a license to operate over the roads or streets of the Canal Zone shall at all times carry thereon, at a conspicuous place at the rear thereof, a metal tag bearing thereon, in large numerals, the number of the license for such vehicle, the letters and numbers of which shall be kept at all times in a legible condition, and on motor vehicles during the period when vehicles are required to display lights, such license tag shall be illuminated so as to be plainly visible at a distance of at least 60 feet. The aforesaid numeral tag shall be obtained from the Executive Secretary, or the official acting under his authority, at the time the license is issued.

Sec. 12. The Executive Secretary shall cause to be kept a register, wherein shall be numbered in consecutive order all licenses granted by him under this Order, with the names of the licensees and a brief description of the vehicle licensed. Such register shall be a public record, and the information shown by such register shall be furnished to the Chief, Police and Fire Division.

Sec. 13. In the use and operation of vehicles over the Canal Zone roads or streets, the following rules shall be observed, viz: All vehicles, in meeting and passing other vehicles, or in being overtaken and passed by other vehicles, shall keep to the left of the road; and in overtaking and passing other vehicles they shall keep to the right. The owner of a vehicle, if riding therein or thereon, shall be held jointly responsible with the person operating such vehicle for the use and operation thereof, agreeably to the provisions of this section; in the absence of the owner, the person using and operating such vehicle shall be held responsible.

Sec. 14. All motor vehicles shall, when being used and operated on any of the roads or streets of the Canal Zone, between the hours of 6 p. m. and 6 a. m., carry and prominently display lights as follows: Automobiles or motor vehicles of similar construction, two bright front or headlights placed one on each side and one red light at the rear; motorcycles without sidecar, one bright front or headlight, and one red light at the rear; motorcycles with side car, two bright front or headlights placed one each on front of motorcycle proper and front of side car, and one red light at rear.

Sec. 15. All bicycles shall, when being operated on any of the roads or streets of the Canal Zone between the hours of 6 p. m. and 6 a. m., carry and prominently display lights as follows: One bright front or headlight.

Sec. 16. All animal-drawn passenger vehicles shall, when being operated on the roads or streets of the Canal Zone between the hours of 6 p. m. and 6 a. m., carry and prominently display lights as follows: Two bright front or headlights placed one on each side, and one red light at rear; *Provided*, That each animal-drawn vehicle employed in the transportation of freight, merchandise, or other property, may in lieu of front or headlights and rear red light, display one bright light visible both front and rear suspended beneath the vehicle.

Sec. 17. The use of flare lights on vehicles within the limits of any town or village in the Canal Zone is hereby prohibited; and on roads outside of any town or village limits the operators of vehicles shall extinguish their flare lights at least three hundred (300) feet from an approaching vehicle, and shall pass such approaching vehicle with the use of their dimmer lights only.

Sec. 18. It shall be unlawful to drive or operate a vehicle over the roads of the Canal Zone outside of town or village limits, at a speed exceeding twenty-five (25) miles an hour on straight roads, or at a speed exceeding twelve (12) miles an hour when approaching or traversing curves, forks, or cross roads, or when traveling over the streets or roads of any town or village of the Canal Zone, or when approaching another vehicle. The owner of a vehicle, if riding therein or thereon, shall be held jointly responsible with the person operating such vehicle for its speed. In the absence of the owner the person actually operating the vehicle shall be held responsible.

Sec. 19. A vehicle shall not pass another vehicle moving the same direction on curves where the road is not visible more than two hundred (200) feet ahead.

Sec. 20. All motor vehicles and bicycles operated on roads and streets of the Canal Zone must be equipped with a suitable sound device such as a horn or bell whereby signals of warning shall be given by the operator.

Unnecessary use of warning signals is prohibited; such signals shall only be used in giving necessary warning.

Sec. 21. Every motor vehicle operated in the Canal Zone shall be provided with a muffler so complete in construction as to prevent any intense, prolonged, or unnecessary noise in the operation or management of such motor vehicle or the machinery in connection therewith, and said muffler shall not be cut out or put out of operation in any town or village in the Canal Zone, nor where horses are present, nor for the purpose of warning of the approach of the motor vehicle. The operator of every motor vehicle in the Canal Zone shall stop the motor of such vehicle when the vehicle is not in motion, provided said operator leaves his vehicle.

Sec. 22. All vehicles except bicycles and animals when parked between the hours of 6 p. m. and 6 a. m., on such roads or streets of the Canal Zone as may be designated by the Governor of The Panama Canal, except in such spaces as are specifically set apart for parking purposes, shall display one red light in rear, and at least one bright front or headlight on road side of vehicle; or, in the case of animal-drawn vehicles employed in the transportation of freight, merchandise, or other property, with bright light visible both front and rear suspended beneath vehicle. A vehicle will be considered as parked when it remains in same position on road longer than time necessary to allow passengers to embark or disembark, or vehicle to be loaded or unloaded.

Parking of vehicles is prohibited within fifteen (15) feet of any fire plug.

Parking of vehicles is also prohibited on such curves and spaces as designated by public notice.

It is prohibited to park a vehicle on any road or street of the Canal Zone on opposite side of road or street closer than thirty (30) feet from the front line or rear line of a vehicle already parked.

Sec. 23. No person shall propel, permit, or allow to be propelled or driven any vehicle on, over, or across any fire hose wheresoever situated; or obstruct, delay, hinder, or impede any fire apparatus or vehicle while in public use; or ob-

struct, delay, hinder, or impede any member of the Fire Division while engaged in the discharge of his duty along, over, on, or about any of the roads, streets, or other public spaces or places within the Canal Zone; or pass or ride in or on any vehicle in front of or at the side of any apparatus or vehicle of the Fire Division, or of the officers and agents thereof, when engaged in public service; or interfere with, hinder, delay, or impede the driver or operator of any fire apparatus or vehicle of the Fire Division, while engaged at or about any fire, or at any other place while in the discharge of his duty.

All vehicles in motion on the streets and roads of the Canal Zone shall, on notice of the approach of any fire apparatus vehicle of the Fire Division immediately draw up to the side of the street or road, and stop until such fire apparatus vehicle has passed.

Sec. 24. Articles of personal property left in public vehicles must be, when found by operator of vehicle, delivered without delay to the nearest police station. Failure of operator of vehicle to comply with this regulation will be considered cause for revocation of operator's chauffeur license in addition to any penalty which may be prescribed for larceny of property.

Sec. 25. The operator of any vehicle concerned in any accident on any street, road or other place in the Canal Zone, whether involving injury to person or to property, shall remain at the scene of the accident until the arrival of the police authorities, or shall communicate without delay to the nearest police authorities a full report of the accident in which he was involved. Any concealment of identity of person or property in an accident in which involved shall be a violation of this Order.

Sec. 26. The operation, management, driving or riding of any vehicle on any of the roads or streets of the Canal Zone in a reckless or negligent manner shall be a violation of this Order.

Sec. 27. The ordinance of the Isthmian Canal Commission of August 25, 1910, and approved by the Secretary of War October 31, 1910, providing for licensing and regulation of motor vehicles in the Canal Zone, and the ordinance of the Isthmian Canal Commission of April 9, 1912, approved by the Secretary of War May 1, 1912, amending Section 1 of the above-mentioned ordinance; ordinance of the Isthmian Canal Commission of April 15, 1911, approved by the Secretary of War April 26, 1911, providing for the licensing and regulation of bicycles in the Canal Zone; Executive Order of February 28, 1912, relative to speed limits and rules of the road in the Canal Zone; Sections 1 and 2 of the Executive Order of October 13, 1914, providing for licenses and taxes and fees; and the Executive Order of September 5, 1916, relating to motor vehicles, and their operation in the Canal Zone, are hereby repealed.

Sec. 28. Any person violating any of the provisions of this Order shall be punished in the manner prescribed in Section 5 of the Act of Congress, approved August 21, 1916, and entitled: An Act extending certain privileges of Canal employees to other officials on the Canal Zone and authorizing the President to make rules and regulations affecting health, sanitation, quarantine, taxation, public roads, self-propelled vehicles, and police powers on the Canal Zone, and for other purposes, including provision as to certain fees, money orders, and interest deposits.

Sec. 29. This order shall take effect 30 days from and after this date.

WARREN G. HARDING.

THE WHITE HOUSE,
April 14, 1921.

Licensing Vehicles.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 9, 1921.

CIRCULAR No. 727:

By virtue of the authority conferred on me by section 1 of the Executive Order of April 14, 1921, relating to licensing of vehicles, road rules, use of lights, tags and signals, and speed regulations in the Canal Zone, published as Panama Canal Circular No. 601-120, the following rules and regulations are hereby prescribed, effective May 14, 1921:

1. The Chief, Division of Civil Affairs, by direction of the Executive Secretary, shall collect fees for vehicle licenses, issue, countersign, and transfer such licenses, issue metal numeral tags, keep a record of all such licenses issued and transferred, and on the 1st and 15th of every month make report of all licenses issued or transferred to the Chief, Police and Fire Division. Vehicle licenses shall show the amount of license fee collected, and serve as a receipt therefor. They shall also contain the particulars mentioned in section 12 of the Executive Order.

NUMERAL TAGS.

2. A numeral tag or plate shall be issued free of charge with each motor vehicle or bicycle license, excepting that in the event of loss or damage of any tag issued with a license for which a fee is charged, a new tag or plate shall be issued for fees as follows: Automobile, truck, or omnibus, $1; motorcycle, 50 cents; and bicycle, 25 cents. There shall be the following series of numeral tags:

Automobile for personal use;
Motorcycle for personal use;
Bicycle for personal use;
Automobile, omnibus, and truck for commercial use;
Tourist 30-day license for personal use;
Motor vehicle and bicycle in exempted areas;
Official automobile;
Official motorcycle;
Official bicycle.

TRANSFER OF LICENSES.

3. Transfer of a vehicle from one licensee to another shall be reported within 10 days to the Chief, Division of Civil Affairs, accompanied by a bill of sale or other satisfactory evidence of the transfer of ownership, whereupon transfer of the license shall be made under section 9 of the Executive Order. Changes in status of a licensed vehicle during the calendar year (*e. g.*, conversion from personal to hacking use, or from transportation of passengers to transportation of merchandise) shall be reported to the Chief, Division of Civil Affairs, and the license exchanged for the type of license provided for the new use made of the vehicle. In such cases, an additional fee will be collected for remaining portion of the year if the higher license rates apply.

RECIPROCAL LICENSES.

4. The provisions of the agreements with the Republic of Panama regarding motor and animal-drawn vehicle licenses shall be continued as heretofore. Reciprocal Canal Zone licenses shall be issued only for vehicles owned by residents of the Republic of Panama upon the presentation of receipt showing the vehicle to be actually licensed in Panama City or Colon.

LICENSES WITHIN EXEMPTED AREAS.

5. Licenses for vehicles used exclusively on the west side of the Canal shall be issued without fee.

ADJUSTMENT OF LICENSE FEES.

6. A resident of the Canal Zone who purchases a motor vehicle for which the Canal Zone license has been issued at the reciprocal rate, may be granted the license rate authorized for residents of the Canal Zone for the remaining portion of the calendar year. By such adjustment the new owner may procure the benefit of the reciprocal rate in the Republic of Panama.

LICENSE FEES FOR PRIVATE BICYCLES AND PRIVATE ANIMAL-DRAWN VEHICLES FOR REMAINDER OF THE CALENDAR YEAR, 1921.

7. Licenses for private bicycles issued on and after July 1, 1920, and prior to May 14, 1921, shall remain in force until June 30, 1921. Licenses granted for animal-drawn vehicles prior to May 14, 1921, shall remain in force during the period for which issued. Licenses for animal-drawn vehicles and private bicycles issued during the

present calendar year subsequent to May 13, shall be in force until December 31, 1921, and issued at the rates fixed in section 5 of the Executive Order.

OFFICIAL VEHICLES.

8. Animal-drawn vehicles owned and operated by the United States Government, The Panama Canal, and the Republic of Panama, shall be permitted to operate in the Canal Zone without individual licenses.

9. Licenses heretofore and hereafter issued for motor vehicles and bicycles owned and operated by the United States Government, The Panama Canal, and the Republic of Panama, shall remain in force so long as the vehicles are not transferred to private use and the license tags are not lost or illegible. Applications for official licenses for vehicles operated by the United States Army should be made through the Department Quartermaster, Panama Canal Department, Quarry Heights.

10. Any person violating these regulations will be subject to prosecution, and upon conviction, may be punished by fine not to exceed $25 or by imprisonment in jail not to exceed 30 days, or by both such fine and imprisonment, in the court's discretion, as provided by the Act of Congress, approved August 21, 1916.

11. Panama Canal Circular No. 717-1, dated April 1, 1918, is hereby revoked.

JAY J. MORROW,
Governor.

Rainfall from April 1 to April 30, 1921, Inclusive.

STATIONS.	Maximum in 1 day.	Date.	Total.
Pacific section:	*Ins.*		*Ins.*
Balboa	.95	17	1.90
Balboa Heights	.43	8	1.19
Miraflores	1.61	17	1.91
Pedro Miguel	.76	17	1.17
Rio Grande	.40	17	.61
Central section:			
[1] Culebra	.13	21	.42
[1] Camacho	.25	17	.58
Empire	.29	17	.65
Gamboa	.25	23	1.16
[1] Juan Mina	1.05	16	2.38
Alhajuela	.27	12 & 22	.96
[1] Vigia	1.10	22	1.44
[1] Trinidad	.59	21	2.16
[1] Monte Lirio	4.93	21	6.63
Atlantic section:			
Gatun	1.93	21	4.69
[2] Brazos Brook	2.40	21	5.28
Colon	3.21	21	7.43
[2] Bocas del Toro	1.04	25	6.04
[1] Porto Bello	1.55	23	6.61

[1] Standard rain gauge—readings at 5 p. m. daily.
[2] Standard rain gauge—readings at 8 a. m. daily.
Automatic rain gauge at unstarred stations—values, midnight to midnight.

Sale of Typewriters.

The Panama Canal has for sale a number of used Underwood typewriters at reasonable prices Some of these machines are at Balboa storehouse and others at Cristobal storehouse, where they may be inspected and purchased direct.

Sale of Lumber.

The Panama Canal has on hand at Balboa storehouse considerable quantities of 1″ x 6″, 1″ x 8″, and 1″ x 10″ dressed lumber, Douglas fir, grade 1, select common. Further information will be furnished by General Storekeeper, Balboa, or at office of Chief Quartermaster, Balboa Heights.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 599.

PORT OF CRISTOBAL—continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
May 3	Centurion	Harrison Line	Belize.
May 3	Osceola [11]	United States Navy	New Orleans.
May 4	Metapan	United Fruit Co.	Bocas del Toro.
May 4	Tivives	United Fruit Co.	New York via Kingston.
May 5	Carrillo	United Fruit Co.	Colombian ports.
May 6	Jan Van Nassau	Royal Netherlands W. I. Mail	Amsterdam via wayports.
May 6	Gen. G. W. Goethals	Panama Railroad Steamship Line.	New York via Haiti.
May 6	Camden	United Fruit Co.	Tampico.
May 7	Panama	Panama Railroad Steamship Line.	New York via Haiti.
May 7	San Mateo	United Fruit Co.	Port Limon.
[11] Tug and barges *Nos. 49* and *50*.			

PORT OF BALBOA.

Date.	Vessel.	Line.	From—
May 1	Reiyo Maru	Toyo Kisen Kaisha	Hongkong.
May 2	Lady Sybil	International Petroleum Co.	Talara.
May 2	Azov	International Petroleum Co.	Talara.
May 3	Natal	East Asiatic Co.	Callao.

*DEPARTURES.

Date.	Vessel.	Line.	For—
May 4	Calamares	United Fruit Co.	New York via Port Limon and Habana.
May 4	Metapan	United Fruit Co.	New Orleans.
May 5	Abangarez	United Fruit Co.	New Orleans via Bocas del Toro and Habana.
May 5	Carrillo	United Fruit Co.	New York via Kingston.
May 5	Tivives	United Fruit Co.	New York via Colombia and Kingston.
May 6	Ulysses	Panama Railroad Steamship Line.	Norfolk.
May 6	Teviot	Pacific Steam Navigation Co.	Cartagena.
May 7	San Mateo	United Fruit Co.	Boston.
May 7	Osceola [3]	United States Navy	New Orleans.
May 2	Reiyo Maru	Toyo Kisen Kaisha	Valparaiso.
May 3	Natal	East Asiatic Co.	Vancouver.
May 5	Sacramento	United States Navy	Sea.
May 6	Denver	United States Navy	Sea.

*Other than ships passing through the Canal.

THE PANAMA CANAL RECORD

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Commodities in April.

Cargo passing through the Canal during the month of April has been classified by commodities, with the areas of origin and destination of the shipments, and is shown on pages 612–615, and 623. The data are as close to accuracy as has been possible with the use of the cargo declarations; but in addition to the figures shown, small shipments of the commodities included in the tables and of other commodities not listed separately, passed through under the designation of "general cargo."

The tables show the total of each commodity; next, under the heading "From," the origin of the shipments making up that total; and under the heading "To," show the distribution of the total among the several areas of destination.

Length, Draft, and Beam of Commercial Vessels.

A classification of the commercial vessels passing through the Canal in April, by length, beam, and salt-water draft, shows the following:

	Atlantic to Pacific.	Pacific to Atlantic.	All vessels.	Per cent of all ships.
Length.				
Less than 100 feet	2	2	4	1.8
100 to 200 feet	4	.....	4	1.8
200 to 300 feet	16	17	33	14.5
300 to 400 feet	31	32	63	27.7
400 to 500 feet	62	54	116	51.1
Over 500 feet	3	4	7	3.1
Total ships	118	109	227	100.0
Aggregate length (feet)	44,276.5	41,308.5	85,585.0	.....
Average length (feet)	375.2	379.0	377.0	.....
Beam.				
Less than 30 feet	4	3	7	3.1
30 to 40 feet	13	11	24	10.6
40 to 50 feet	20	19	39	17.2
50 to 60 feet	72	66	138	60.8
60 to 70 feet	9	9	18	7.9
70 to 80 feet	.....	1	1	.4
Total ships	118	109	227	100.0
Aggregate beam	5,888.5	5,573.8	11,462.3	.....
Average beam	49.9	51.0	50.5	.....
Draft.				
Less than 15 feet	15	11	26	11.5
15 to 20 feet	28	23	51	22.5
20 to 25 feet	36	43	79	34.8
25 to 30 feet	36	29	65	28.6
30 to 35 feet	3	3	6	2.6
Total ships	118	109	227	100.0
Aggregate draft	2,565.9	2,362.4	4,928.3	.....
Average draft	21.7	21.7	21.7	.....

The ship of greatest length through the Canal during the month was the *San Fernando*, with a length of 530.4 feet, bound from Tampico to Singapore, and carrying 16,117 tons of fuel oil; this ship also had the greatest draft of any vessel through the Canal, 31.4 feet. The ship with the widest beam was the *Hawkeye State*, with a beam of 72.2 feet, bound from San Francisco to New York.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight May 14, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Celtic Prince	7	17.05	8	6.25	8	13.57	8	15.10	British	Prince Line, Limited	449.0	57.3	28.5	New York	Pt. Swetten'm.	General and oil	9,000	8,699	6,208
La Brea	8	6.05	8	6.50	8	15.09	8	16.35	American	Union Oil Co	435.0	56.0	30.0	Pt. Lobos	Los Angeles	Crude oil	10,129	7,405	5,158
Mobile City	7	17.59	8	6.35	8	16.18	8	17.25	American	United States Steel Products Co.	395.5	55.0	28.0	New York	Honolulu	General	8,525	7,285	5,256
Eurydamas	8	13.25	8	13.35	8	20.45	8	23.45	British	Alfred Holt & Co	410.0	49.0	26.11	New York	Yokohama	General	5,686	5,718	4,189
Amur Maru	9	11.50	9	12.10	9	19.35	9	20.41	Japanese	Osaka Shosen Kaisha	425.0	56.0	19.0	New York	Kobe	General	1,231	7,901	5,629
Karamea	9	13.10	9	13.25	9	20.48	9	21.52	British	Shaw, Saville & Albion Co	420.0	54.0	21.6	London	Dunedin	General	1,000	7,106	5,073
Junia	9	13.30	10	6.07	10	13.10	10	14.25	British	Pacific Steam Navigation Co	392.0	50.0	19.3	London	Valparaiso	General	2,460	5,930	4,395
Choyo Maru	9	14.23	10	6.15	10	14.04	12	14.00	Japanese	Toyo Kisen Kaisha	400.0	53.0	20.0	Philadelphia	Kobe	General	3,180	6,186	4,457
Naugus	9	15.15	10	6.15	10	15.53	10	17.10	American	Barber Line (S. B.)	402.0	53.0	26.6	New York	Chefoo	Kerosene	7,062	6,583	4,873
Los Angeles	9	18.27	10	7.33	10	16.52	10	18.10	American	Union Oil Co	435.0	56.0	29.0	Pt. Lobos	Los Angeles	Crude oil	11,000	7,380	5,195
Salvador	2	15.30	10	9.18	10	16.42	10	17.40	British	Pacific Steam Navigation Co	215.0	33.0	13.6	Cristobal	Champerico	General	514	1,213	692
Eten	9	18.30	10	11.08	10	18.53	10	20.13	Peruvian	Peruvian Steamship Line	450.0	53.2	26.8	New York	Callao	Coal	7,037	7,422	5,219
San Jose	5	20.17	11	6.00	11	13.06	11	18.18	American	Pacific Mail Steamship Co	283.0	37.0	21.5	Cristobal	San Francisco	General	561	2,352	1,602
Santa Olivia	11	7.57	11	8.25	11	16.19	11	17.22	American	Atlantic & Pacific Steamship Co.	404.6	53.9	22.0	New York	Callao	General	4,185	6,802	4,943
Acajutla	4-30	15.10	11	8.50	11	15.17	11	16.10	British	Pacific Steam Navigation Co	215.0	33.5	13.0	Cristobal	Guayaquil	General	293	1,273	706
Cauca	10	15.35	11	11.12	11	17.15	11	18.18	British	Pacific Steam Navigation Co	246.0	35.0	15.0	Cristobal	Corinto	Ballast		1,582	1,023
S. C. 285	10	15.12	11	13.10	11	17.55			American	United States Navy				Cristobal	Balboa				
Affinity [1]			11	6.00	11	8.18			American	E. J. Hooper	29.0	9.0	3.8	Cristobal	Gatun Lake			6	4
Palena	8	13.35	12	6.10	12	13.08	12	14.10	Chilian	South American Steamship Line	350.0	42.0	23.3	Cristobal	Valparaiso	General	452	3,666	2,577
Orari	12	2.18	12	7.10	12	14.52	12	16.00	British	New Zealand Steamship Co	460.7	60.2	25.8	London	Wellington	Coal	5,550	9,827	6,895
Annapolis [2]	13	1.17	14	6.20	14	12.49			American	United States Navy	206.0	36.0	13.7	Philadelphia	Balboa				
Noorderdijk	14	6.10	14	8.25	14	15.53	14	17.00	Dutch	Holland-American Line	470.0	58.0	17.0	Rotterdam	San Francisco	Ballast		8,888	6,612
Takaoka Maru	14	12.55	14	13.10	14	20.11	14	21.15	Japanese	Nippon Yusen Kabushiki Kaisha	445.0	58.0	22.0	New York	Shanghai	General	5,657		

[1] Launch.

[2] Training ship.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Palena	7	16.00	8	6.43	8	13.35	12	6.10	Chilean	Chilean Line	350.0	42.1	19.1	Valparaiso	Cristobal	General	1,146	3,666	2,577
Garfield	8	13.30	8	14.10	8	21.28	8	23.55	American	W. R. Grace & Co	299.4	45.0	18.6	Callao	New York	Sugar, ore, gen'l.	2,600	3,228	2,010
West Camak	8	18.40	9	6.21	9	18.05	10	3.55	American	Williams Dimond Co. (S. B.)	410.5	54.0	25.6	Portland	Antwerp	General	6,539	6,622	4,880
Steel Ranger	9	3.15	9	7.37	9	18.00	9	18.09	American	United States Steel Products Co.	424.2	56.2	23.0	Seattle	New York	Lumber, general.	6,962	7,539	5,448
Sciota [3]	3	16.00	9	9.20	9	17.31	16	7.00	American	United States Navy	149.4	30.0		Balboa	Cristobal				
Athenic	9	9.35	9	10.24	9	19.50	10	14.55	British	White Star Line	500.3	63.3	26.0	Wellington	Southampton	(4)	5,558	12,895	9,570
San Joaquin	9	11.30	9	12.16	9	20.15	10	12.25	Norwegian	Wilhelm Wilhelmsen	425.4	57.1	19.0	Tocopilla	Tampico	Ballast		7,059	5,042

[3] Tug.

[4] Butter, cheese, meat, wool, fruit, etc.

Cauca	10	6.45	10	7.56	10	15.35	11	11.12	British	Pacific Steam Navigation Co.	246.0	35.2	12.6	Guayaquil	Cristobal	(6)	347	1,582	1,023
S. C. 285	4-18	13.44	10	8.00	10	15.12	11	13.10	American	United States Navy	116.0	16.0	.....	Balboa	Cristobal	.....	.....	.....	.....
Maimoa	9	22.30	10	8.00	10	16.20	10	18.37	British	Shaw, Saville & Albion Co.	477.9	63.0	24.6	Wellington	London	(7)	6,400	11,053	7,894
West Nomentum	10	18.45	11	7.11	11	16.35	11	20.40	American	Sudden & Christensen (S. B.)	410.5	54.3	24.6	Portland	Belfast	Wheat and flour.	6,518	6,583	4,914
Statesman	10	20.20	11	7.23	11	17.53	11	19.23	British	T. & J. Harrison	423.3	53.0	27.0	Vancouver	London	(8)	8,220	6,361	4,592
Dolphin [5]	3-11	6.00	11	8.10	11	19.38	11	19.38	American	United States Navy	256.0	33.0	16.0	Balboa	Bocas del Toro	.....	.....	.....	.....
Santa Elisa	11	7.00	11	9.30	11	19.40	11	20.55	American	W. R. Grace & Co.	360.3	51.7	23.1	Valparaiso	New York	(9)	3,390	5,957	4,325
Woudrichem	11	3.30	11	11.37	11	21.50	.....	.....	American	Kennebec Steamship Co.	355.1	43.5	15.0	Hongkong	New York	Rice	1,000	4,103	2,787
Orani	3	0.45	11	13.27	11	23.25	12	7.20	American	Frank Waterhouse (S. B.)	402.4	53.1	26.0	Portland	Hamburg	Wheat	7,700	6,577	4,954
Orcus	11	12.50	11	13.45	12	0.25	12	9.45	American	Wessel Duval & Co. (S. B.)	380.2	53.1	23.8	Tocopilla	New Orleans	(10)	6,732	5,667	4,220
Yalza	12	3.30	12	7.59	12	15.06	12	15.46	American	N. A. & Western S. S. Co. (S. B.)	400.7	54.0	15.0	Seattle	New York	Fruit, general	2,251	6,529	4,737
Hanley	12	9.50	12	11.01	12	19.30	14	6.40	American	McCormick & McPherson (S.B.)	440.0	56.0	28.1	Portland	Naples	Wheat	9,216	8,301	6,019
Asia	12	21.30	13	7.50	13	15.24	13	16.53	Danish	East Asiatic Co.	413.0	53.6	29.4	San Francisco	Fayal	General	9,598	7,396	5,587
S. V. Harkness	13	7.40	13	8.44	13	16.39	13	19.25	American	Standard Oil Co.	419.4	57.2	19.0	San Francisco	Tampico	Ballast	.....	7,443	5,544
Barima	13	6.00	13	9.21	13	17.00	.....	.....	British	Pacific Steam Navigation Co.	220.0	37.0	13.6	Champerico	Cristobal	General	868	1,650	918
S. C. 285	11	17.55	13	6.50	13	12.35	.....	.....	American	United States Navy	116.0	16.0	.....	Balboa	Cristobal	.....	.....	.....	.....
Cathlamet	13	16.30	14	6.36	14	13.20	14	15.55	American	U. S. & Australian Line (S. B.)	410.5	54.2	18.0	Melbourne	New York	General	370	6,755	4,875
Ruapehu	14	3.15	14	8.04	14	17.45	15	12.10	British	New Zealand Shipping Co.	457.3	58.2	24.8	Wellington	London	(7)	4,871	9,009	6,779
Jamaica	14	4.20	14	8.28	14	17.35	.....	.....	British	Pacific Steam Navigation Co.	220.0	34.0	11.3	Tumaco	Cristobal	General	283	1,187	622
Maricopa	14	13.45	14	14.25	14	21.35	15	12.10	Norwegian	Wilhelm Wilhelmsen	425.2	57.0	19.0	Antofagasta	Tampico	Ballast	.....	.....	.....

[5] Gunboat. [6] Coffee, cocoa, and general. [7] Cold storage and general. [8] Wheat, flour, and general. [9] Nitrate, copper, and general. [10] Nitrate of soda and potash.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 8	Heredia	United Fruit Co.	New Orleans via way ports.	May 7	Camden	United Fruit Co.	Bocas del Toro.
May 9	Antillian	Leyland Line	Liverpool via wayports.	May 8	Heredia	United Fruit Co.	Bocas del Toro.
May 10	Pastores	United Fruit Co.	New York via Habana.	May 9	Dowea	Curacao Shipping Co.	San Lorenzo.
May 11	Heredia	United Fruit Co.	Bocas del Toro.	May 9	Jan Van Nassau	Royal Netherlands W. I. Mail	Puerto Colombia.
May 11	San Blas	United Fruit Co.	Boston.	May 11	Gen. G. W. Goethals	Panama Railroad Steamship Line	New York via Haiti.
May 12	Matouba	French Line	Fort-de-France.	May 11	Antillian	Leyland Line	New Orleans.
May 13	Leon XIII	Spanish Line	Barcelona via wayports.	May 11	Pastores	United Fruit Co.	New York via Port Limon and Habana.
May 14	Atenas	United Fruit Co.	New Orleans via Habana.				
May 14	Camito	Elders & Fyffes, Ltd	Port Limon.	May 11	Heredia	United Fruit Co.	New Orleans.
.....	.....	.....	.....	May 12	San Blas	United Fruit Co.	Port Limon.
.....	.....	.....	.....	May 12	Panama	Panama Railroad Steamship Line	New York.
.....	.....	.....	.....	May 14	Camito	Elders & Fyffes, Ltd	Kingston.

PORT OF BALBOA.

May 13	Sacramento	United States Navy	Sea.	.....	.....	.....

*Other than ships passing through the Canal.

Classification of Cargo Passing Through the Panama Canal, by Commodities, Showing Origin and Destination of same, Month of April, 1921.

COMMODITY STATISTICS.

ATLANTIC TO PACIFIC.

(Figures represent tons of 2,240 pounds.)

Commodity.	Total.	From— West Indies.	East coast of South America.	East coast of Canada.	East coast of Mexico.	Cristobal, C. Z.	Other Europe.	British Isles.	East coast of United States.	To— West coast of South America.	West coast of United States.	Far East.	Australasia.	West coast of Canada.	West coast of Central America.	Balboa, C. Z.
Agricultural implements	1,381							16	1,365		231		1,150			
Automobiles	394					10	25		359	45	42	66	231		10	
Brick, fire	35								35	35						
Cacao	517		90					127	300		390			127		
Calcium	100								100		100					
Canned goods:																
Fish	78						12		66		78					
Vegetables	155					47			108	47	108					
Other	67								67		67					
Cement	5,412						1,047	2,411	1,954	2,965	6	376	2,035		30	
Cereals	45								45			45				
Chemicals	1,173					139	401	302	331	330	400	138	305			
Coal	39,915							16,021	23,894	14,650	3,837	8,685	12,743			
Coffee	3,476		3,147			40		69	220	40	3,436					
Cold storage:																
Lard	28					28				28						
Beef	2								2		2					
Cork	30					30				30						
Cotton	2,692								2,692			2,692				
Explosives	14								14		14					
Flour	28					25			3	25	3					
Fruit, dried	9							9						9		
Glassware	43							10	33			33		10		
Guano	1,494		1,494								1,494					
Hats	3,487						3,476		11		3,487					
Ink	20								20		20					
Linseed	1,040		1,040								1,040					
Liquor	1,265					273		950	42	123		42	825	125	150	
Lumber	25								25	20	5					
Manufactured goods:																
Iron and steel	78,645		3,900			82	308	1,060	73,295	10,934	35,119	23,103	9,177	312		
Machinery	8,600					142	540	2,246	5,672	2,962	1,378	1,253	2,887		120	
Railroad material	7,569						487	900	6,182	787	215	5,138	1,429			
Textiles	1,266					459	250	259	298	679	457				130	
Other	5,939					112		86	5,741	42	5,348	1	88	380	80	
Marble	12								12			12				

Metals:																
Aluminum	81								81			81				
Copper	79								79		25	54				
Iron	4,724						4,031	500	193	121	168		4,435			
Lead	70							70					70			
Nickel	29								29			29				
Tin	8,950							50	8,900		6,650	2,000	300			
Zinc	427						425	2			425			2		
Other	36								36		36					
Oil:																
Crude	112,257				82,985				29,272	55,337	20,575	22,447	3,898			10,000
Refined	48,126					4			48,122	1,898	18,612	14,259	13,353		4	
Vegetable	106					40	16		50		106					
Ore:																
Copper	45							30	15		15		30			
Other	65						65				50		15			
Paints	153					10		90	53	10			60	83		
Paper	1,448					49	70	35	1,294	219	616	236	377			
Phosphates	503								503				503			
Potash, sulphate of	35						35						35			
Rice	802					300			502	802						
Rosin	310								310	82	17		211			
Rubber	245		245							245						
Rubber, manufactured	203								203		101	102				
Salt	407							405	2		2		405			
Sand, glass	4,720						4,720				4,720					
Seed, canary	175	175									175					
Shells, oyster	602								602		602					
Soap	90								90		90					
Sugar	25,216	25,211							5			14,145	5,780	5,291		
Sulphur	7,850								7,850				7,850			
Tobacco	3,880					15		38	3,827	60	1,189	1,050	1,578	3		
Turpentine	15								15	7			8			
Wax, paraffin	679								679	679						
Wood, dye	1								1	1						
Wood, hard	20								20	20						
Zinc, sulphate of	150								150	150						
General	113,346		725	6,150		4,589	11,317	14,316	76,249	23,306	25,131	14,929	43,112	50	1,818	
Total	500,801	25,386	10,641	6,150	82,985	6,394	27,225	40,002	302,018	121,679	136,582	110,916	112,890	6,392	2,342	10,000

PACIFIC TO ATLANTIC.

(Figures represent tons of 2,240 pounds.)

Commodity.	Total.	From—						To—					
		West coast of Central America.	West coast of Canada.	Australasia.	Far East.	West coast of United States.	West coast of South America.	East coast of United States.	British Isles.	Other Europe.	Cristobal, C. Z.	West Indies.	Mexico.
Auto accessories	259					259		259					
Automobiles	17					17		16	1				
Balsam	1	1									1		
Bark:													
Cascara	12					12		12					
Cinchona	20						20				20		
Peruvian	17						17		17				
Quillay	25						25	5		20			
Barley	12,152					10,225	1,927		10,147	2,005			
Beans and peas	1,622			149		1,091	382	891	149	208	10	364	
Beeswax	12						12	10			2		
Borax	1,004						1,004		504	500			
Cacao	1,279			6		56	1,217	344	6		929		
Canned goods:													
Fish	3,735		660			3,075		1,945	1,150	415		225	
Fruit	6,227			5		6,217	5	3,466	2,156	605			
Meat	410			70		336	4		70	336	4		
Milk	1,452					1,452			1,452				
Vegetables	905					905		905					
Coffee	7,754	4,525				71	3,158	3,268	1,390	379	2,717		
Cold storage:													
Beef	6,878			6,878					6,878				
Butter	6,440			6,440					6,440				
Casein	237			237					237				
Cheese	6,901			6,901					6,901				
Glaxo	844			844					844				
Mutton	12,246			11,646			600		11,646	600			
Tallow	2,564		37	2,515		12		39	2,515		10		
Other	7,814			7,214		600			7,814				
Copra	3,629			2,808	703		118	703		2,926			
Corn	4,650					4,650				4,650			
Cotton, raw	633					323	310	323	8		302		
Crockery	12					12		12					
Earthenware	31					31		31					
Fertilizer	225					225		225					
Fireworks	61				61			61					
Flour	17,549					17,549		210	9,597	7,742			

Fruits:													
Fresh	1,442			331		1,101	10	1,111	331				
Dried	1,301					1,301		672	204	425			
Gall nuts	50				50			50					
Glue	20						20	20					
Glycerine	40					40		40					
Gum Kauri	307			307					307				
Hair	4			4					4				
Hardwoods	191	191									191		
Hats	90				88		2	88			2		
Hay	67						67				67		
Hemp	1,509			300	1,203		6	1,203	300		6		
Honey	20	16					4			4	16		
Hops	22					22			22				
Horns	69			19		43	7	43	19	4	3		
Ink	20					20		20					
Infusorial earth	312					312		312					
Iodine	16						16	16					
Ivory nuts	988						988	713		70	205		
Leather	15						15			15			
Liquors	3			1			2		1		2		
Lumber	23,339		5,716			17,623		16,960	5,766	338			275
Manufactured goods:													
Iron and steel	66		58			3	5	8		58			
Machinery	705					705		25					680
Other	373				373			373					
Metals:													
Antimony	111				111			111					
Copper	12,494		799			970	10,725	8,272	500	100	3,622		
Lead	766					762	4	762			4		
Tin	102						102				102		
Others	5						5				5		
Milk, powdered	576			576					576				
Nitrate	118,729					69	118,660	64,938	1,109	52,682			
Oats	297			257			40		257	40			
Oils:													
Coconut	514				514			514					
Refined	20,608					20,608		9,608	11,000				
Vegetable	1,422				1,422			1,422					
Ores:													
Copper	8,259						8,259	7,964	96	199			
Chrome	5,120			5,120				5,120					
Gold and silver	24						24	24					
Tin	1,309						1,309	850	459				
Other	40						40	40					
Peanuts	22					22		22					
Phosphates	6,750			6,750						6,750			
Porcelain	276				276			276					
Rice	20					20					20		
Rubber	645			5	634		6	634	5		6		
Seeds, mustard	132				132			132					
Skins and hides	688	16		241	225		206	383	231	9	65		

(Continued on page 623, column 2.)

Submarine Cruise.

Five of the O-boat submarines, part of the regular fleet stationed at the Coco Solo submarine base, sailed from Balboa on the 17th instant for a cruise extending to Callao, calling also at Guayaquil. The fleet is convoyed by the naval tug *Sciota*. The O-boats are in command of Lieut. Commander C. M. Hull of the Coco Solo submarine base.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending May 14, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Jan Van Nassau	Royal Netherlands W. I. Mail	.....	May 9	.....	1,513
Salvador	Pacific Steam Navigation Co	.....	May 10	.....	450
San Jose	Pacific Mail Steamship Co	.....	May 11	.....	754
Gen. G. W. Goethals	Panama Railroad Steamship Line	.....	May 11	.....	1,800
Panama	Panama Railroad Steamship Line	.....	May 12	.....	2,720
Palena	Chilean Line	May 8	May 12	1,146	457
Junin	Pacific Steam Navigation Co	May 9	May 10	26	(2)
Antillian	Leyland Line	May 9	May 11	566	14
Cauca	Pacific Steam Navigation Co	May 10	May 11	347	(2)
Pastores	United Fruit Co	May 10	May 11	321	1½
Heredia	United Fruit Co	May 11	May 11	5	5½
San Blas	United Fruit Co	May 11	May 12	12	(2)
Matouba	French Line	May 12	May 14	(1)	425
Barima	Pacific Steam Navigation Co	May 13	.....	868	.....
Leon XIII	Spanish Line	May 13	.....	636	.....
Camito	Elders & Fyffes, Ltd	May 14	May 14	10	½
Point Judith	Pacific Mail Steamship Co	May 14	.....	136	.....
Jamaica	Pacific Steam Navigation Co	May 14	.....	205½	.....

[1] No cargo discharged. [2] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending May 14, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Borgland	Peter Olson	May 8	May 8	100	13
Palena	South American Steamship Line	May 8	May 8	1	71
Cauca	Pacific Steam Navigation Co	May 10	May 10	7	.....
Salvador	Pacific Steam Navigation Co	May 10	May 10	.....	2
San Jose	Pacific Mail Steamship Co	May 11	May 11	.....	8
Cauca	Pacific Steam Navigation Co	May 11	May 11	.....	7
Barima	Pacific Steam Navigation Co	May 13	May 13	1	.....
Jamaica	Pacific Steam Navigation Co	May 14	May 14	1	.....

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended May 16:

Steamships *Lake Gunni*, installing new set H. P. piston-rod packing on main engine; installing piston follower; truing-up piston and renewing studs on feed pump; *Lady Sybil*, docking, staging, and cleaning; scaling and painting bottom; renewing bilge cover boards in No. 2 hold; renewing approximately 20 feet of fender, port, forward end; annealing steering chains, and performing other miscellaneous deck department repairs; renewing brickwork in boilers where necessary; removing old and installing new donkey boiler; patching and renewing boiler, jacket-lagging, and lagging and jacketing new donkey boiler; renewing seats on direct-connected bilge pumps; repairing anchor windlass; Spanish cruiser *España*, docking, cleaning and painting bottom; repairing hull forward where damaged through grounding; miscellaneous minor repairs to hull and engineer's departments, consisting of repairs to drains and vent and sounding pipes in engine rooms; overhauling various pumps, renewing suction and discharge lines to circulators; repairing ash hoist trunk; renewing discharge pipes on ash ejectors; manufacturing evaporator coils; manufacturing one boat boom; repairing and reriveting torpedo net platform, and renewing miscellaneous eye pads and ringbolts on deck; examining rudder; overhauling sea valves

and zincs on hull; steamship *Azov*, docking, staging, and cleaning; painting bottom; grinding-in sea valves; repacking cargo tank valves; calking cargo tank and bunker bulkheads where necessary; examining tail shaft; renewing main engine rocker shaft brasses; overhauling air deflectors in furnace fronts; miscellaneous valve work on steam lines and service pumps; and miscellaneous deck work; tug *Miraflores*, docking, cleaning and painting bottom, repairing fenders and rail; launch *Taboga*, renewing exhaust pipe and fittings, renewing stem; recalking hull and renewing copper sheathing as necessary; renewing sections of plank amidships where broken; renewing approximately 50 per cent of garboard strakes, port and starboard; renewing upper and lower fenders, port and starboard; renewing wood decking, beams, and covering board; renewing monkey rail, and performing other hull repairs; barges *No. 201*, renewing plates, fenders and deck on one corner where damaged; rebuilding stanchions on roof; *No. 137*, docking, staging, cleaning and painting bottom; cleaning and painting inside and out; renewing hopper sheathing and strongback sheathing; and rebuilding strongbacks and A-frames; overhauling operating gear; launch *Coco Solo*, renewing stem, repairing monkey rails and repairing copper sheathing; subchaser *No. 285*, docking, cleaning bottom, patching copper, calking leaks in bottom and recalking deck; steamship *West Wind*, manufacturing and installing 12 soot blowers; launch *Chilibre*, repairing copper on hull; repairing rudder; steamship *Orani*, securing astern element in main turbine; truing-up buckets and rebabbitting bearings; rebricking port and starboard boilers.

The following vessels were at the Cristobal shops for repairs during the week ended May 16:

Steamship *Manavi*, rebore steam end of Weir's pump; dry dock, clean and paint; manufacture and install new funnel, etc.; motor ship *Anam*, clean and paint bottom; clean pistons and rings of main engines; examine same and renew as necessary; true-up main bearings, etc.; U. S. subchaser *No. 286*, dock and undock; clean bottom; examine all sea valves and repair as necessary; examine and repair bottom, etc.; steamship *Eastern Crown*, take down, examine, and renew, where necessary, high-pressure piston rod packing, etc.; clean and calibrate one vacuum gauge and four pressure gauges; refit spider and furnish one set of studs for line bilge pump, etc.; relieve and adjust heater control valve for feed pump; manufacture one gauge cock for line at main feed pump; renew packing and valve; supply 3 wheels for ash travelers, etc.; U. S. submarine *R–1*, repair, retin, and test 3 air compressor cooler coils; U. S. S. *Camden*, manufacture rings, pistons, glass lens, bolts, handle, etc.; barge *No. 116*, test all compartments, and stop leaks; repairs to A-frames, sheathing, fenders, etc.; derrick barge *No. 157*, repair hull, renew sheathing where necessary and paint; steamship *Barima*, U. S. submarine *R–2*, steamship *Leon XIII*, U. S. submarines *R–3*, *R–4*, steamship *Atenas*, U. S. submarine *R–8*, steamship *Hanley*, bark *C. D. Bryan*, U. S. S. *Sciota*, launch *Patrol*, dredge *No. 86*, tug *Favorite*, minor repairs.

Notice to Mariners.—Obstructions to Navigation.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 10, 1921.

CIRCULAR No. 643–83:

The following obstructions to navigation have been reported by radio:

(*a*) On May 8, 1921 (6.22 p. m.), the master of the steamship *Steel Mariner* reports having passed, while in latitude 7° 2′ North, longitude 81° 56′ West, a large log about 70 feet long and 8 feet in diameter and partly submerged.

(*b*) On May 8, 1921 (10.30 a. m.), the master of the same vessel reports having passed, while in latitude 7° 2′ North, longitude 81° 9′ West, another log about 60 feet long and 5 feet in diameter. Both dangerous to navigation.

(*c*) On May 8, 1921 (5 p. m.), the master of the steamship *Tairoa* reports having passed, while in latitude 5° 35′ North, longitude 81° 45′ West, a partly submerged wreck about 100 feet long, dangerous to navigation.

(*d*) On May 9, 1921 (6.30 a. m.), the master of the steamship *Labrea* reports having passed, with Mariato Point bearing northeast, 5 miles off, a large tree about 60 feet long and partly submerged with roots protruding above the water, dangerous to navigation.

JAY J. MORROW,
Governor.

Notice to Mariners.—Obstruction to Navigation.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 12, 1921.

CIRCULAR No. 643-84:

The master of the steamship *Cauca* reports by radio having passed at 12.45 p. m., on May 7, while in latitude 1° 15′ North, longitude 79° 32′ West, a large tree trunk about 60 feet long with one end protruding from the water and resembling a sail, and visible at a distance of about 5 miles, very dangerous to navigation.

JAY J. MORROW,
Governor.

Executive Order.—Addition to Quarry Heights Military Reservation.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 3, 1921.

CIRCULAR No. 601-119:

The Executive Order quoted below is published for the information of all concerned.

JAY J. MORROW,
Governor.

WHEREAS Executive Order No. 3386, dated January 21, 1921, setting apart and describing an addition to the Quarry Heights Military Reservation incorrectly described the location of monument No. 12, as "on the contour of 150 feet elevation" when the same should have been described "on the contour of 325 feet elevation."

NOW, THEREFORE, said Executive Order is hereby amended to read as follows:

The area of land hereinafter described, situated in the Canal Zone, is hereby set apart and assigned to the uses and purposes of a military reservation under the jurisdiction of the Secretary of War, as an addition to and to be administered as a part of the Quarry Heights Reservation heretofore set apart by Executive Order No. 3202 of December 22, 1919; but said area shall be subject to the civil control and jurisdiction of the Governor of the Panama Canal, in conformity with the Panama Canal Act.

The boundaries of the said addition to Quarry Heights Reservation are described as follows:

The point of beginning is a brass plug in a concrete monument #10, which is N. 1° 51′ W., 711.4 feet, more or less, from Ancon triangulation station; the coordinates of Ancon station are Lat. 8° 57′ plus 2572.76 feet, Long. 79° 33′ plus 883.66 feet; thence

1. S. 76° 6′ E., 833 feet, more or less, to a brass plug in a concrete monument #11; thence

2. N. 12° 40′ W., 645 feet, more or less, to concrete monument #12, which monument is on the contour of 325 feet elevation; thence

3. In a northwesterly direction following the 325-foot contour to concrete monument #13, which monument is on the extreme northern point of the 325-foot contour; thence

4. In a general southerly direction following the 325-foot contour to the intersection with the old boundary line between monument #9 and monument #10, this intersection being marked by concrete monument #14; thence

5. S. 75° 58′ E., 382.6 feet to monument #10 which is the point of beginning.

Monuments #10, #11, and #9 are the same as used in Executive Order of December 22, 1919, in describing the boundary of Quarry Heights Reservation.

All bearings refer to the true meridian.

WARREN G. HARDING.

THE WHITE HOUSE,
April 8, 1921.

(NOTE—The Order of January 21, 1921, mentioned in the above Executive Order was not published as a Panama Canal Circular.)

Midnight Train Discontinued.

Effective on Wednesday, June 1, train No. 101, leaving Colon at 11.15 p. m., daily except Saturday, will be discontinued.

Removal of Washington Office, The Panama Canal.

In accordance with instructions issued by the Public Building Commission, which has full control over all Government owned and rented buildings in the District of Columbia, the Washington Office of The Panama Canal has removed from its old quarters at the Mills Building, 1709 G Street, N. W., to quarters assigned in the Old Land Office Building, 7th and E Streets, N. W. Employees going on leave, who contemplate calling at the Washington Office, should bear this in mind.

Weather Conditions in April, 1921.

The rainfall for the month was generally below normal everywhere except at Monte Lirio, Gatun, Brazos Brook, and Colon. Totals ranged from 0.42 inch at Culebra to 7.43 inches at Colon.

The greatest amount of precipitation recorded on any one day was 4.93 inches at Monte Lirio on the 21st.

The estimated rainfall over Gatun Lake watershed was 3.25 inches, compared with a 11-year mean of 4.62 inches; over the Chagres River watershed area above Alhajuela it was 3.65 inches, compared with a 20-year mean of 4.55 inches.

The air temperature was below the normal at Balboa Heights, Alhajuela, and Gatun, and above at Gamboa and Colon. The atmospheric pressure was above normal at both entrances of the Canal, while the relative humidity and temperature of the sea water were below the normal.

The daytime cloudiness was below normal on the Pacific side and above on the Atlantic. Wind movement was generally above normal and the evaporation was above the average everywhere except over the Gatun Lake surface at Gatun.

One light fog was observed at Gatun station, which lifted by 7.15 a. m.

No seismic disturbances were recorded during the month.

Gatun Lake hydrology—Mean elevation of Gatun Lake, 83.10 feet; maximum, 83.78 feet on the 1st; minimum, 83.57 feet on the 30th; evaporation from Gatun Lake surface, 6.019 inches; rainfall on Gatun Lake drainage basin, 3.25 inches; total yield of Gatun Lake watershed was 0.93 inch and amounted to 29 per cent of the rainfall.

Climatological conditions at the representative stations are summarized in the following table;

Stations.	Pressure (reduced to mean of 24 hours.)	Temperature.					Mean relative humidity.	Precipitation.			Wind.				
		Mean.	Maximum.	Date.	Minimum.	Date.		Total inches.	Station average.	Days with 0.01 inch or more.	Total movement (miles).	Prevailing direction.	Maximum velocity in miles.	Direction.	Date.
Balboa Heights	29.858	81.1	93	Apr. 29	70	Apr. 20	77.5	1.19	3.00	5	6,587	N.W.	26	N.W.	Apr. 20
Colon	29.874	81.8	88	Apr. 9	74	Apr. 12	77.5	7.43	4.35	16	10,899	N.	28	N.	Apr. 19
Gatun	.....	80.4	89	Apr. 19	72	Apr. 13	....	4.69	5.59	14	6,450	N.	26	N.	[1] Apr. 9
Gamboa	.....	81.4	92	Apr. 23	71	Apr. 13	....	1.16	3.57	12	5,006	N.E.	26	N. E.	Apr. 19

[1] And 18.

June Weather Probabilities.

The following weather conditions may be expected in the Canal Zone during the month of June, 1921. These predictions are based on the weather records at Cristobal and Balboa Heights for the last 14 and 16 years, respectively:

Winds—June weather is a continuation of the rainy season conditions of May, with no material change in any of the meteorological elements. Light variable winds will prevail with southeast winds predominating on the Atlantic Coast and northwest winds over the interior and on the Pacific Coast. The average hourly velocity will be about 7 miles on the Atlantic Coast and about 6 miles on the Pacific Coast.

Rains—Heavy showers may be expected over the Isthmus. The average monthly rainfall at Cristobal is 13.35 inches and at Balboa Heights, 7.44 inches. The average

number of days with rainfall of 0.01 inch or more is 25 on the Atlantic side and 20 on the Pacific side, while the average number of days with 1 inch or more is 5 and 2, respectively.

Fogs—No fogs are likely to occur at either Canal entrance. Night and early morning fogs may be expected quite frequently over the interior. Most of these will be light, however, and will be dissipated before 8.30 a. m.

Temperature—The average monthly mean temperature is about 80° F. on both coasts. The mean daily range of temperature is about 14° F. on the Pacific side and about 9° F. on the Atlantic side. No material departure from these averages may be expected. The extremes of record are 95° F. and 70° F., but this great a range in temperature seldom occurs.

Relative humidity.—The relative humidity will average about 85 per cent on both coasts; the daily range, however, will be considerably greater on the Pacific side.

Storms—Local rain and thunder storms may be expected quite frequently during the month. During these storms wind velocities of from 30 to 35 miles may be obtained, but they are of too short duration to cause a rough sea. Generally cloudy weather with smooth to moderate seas may be expected at both Canal entrances.

Tides—The tidal fluctuations on the Atlantic side are too small to affect navigation. Balboa tide predictions for June are given below. These are taken from *Tide Tables for 1921* published by the Department of Commerce, Washington, D. C.

Day of- W.	Day of- Mo.	Time and Height of High and Low Water.				Day of- W.	Day of- Mo.	Time and Height of High and Low Water.				Day of- W.	Day of- Mo.	Time and Height of High and Low Water.			
W	1	5:33	11:47	**6:11**	.....	S	11	1:21	7:37	**1:54**	**7:57**	Tu	21	4:18	10:28	**4:25**	**10:50**
		4.1	13.1	**3.8**	.....			0.1	16.0	**1.5**	**15.4**			14.9	2.0	**15.2**	**0.7**
Th	2	0:14	6:28	**12:39**	**7:05**	S	12	2:18	8:31	**2:56**	**8:56**	W	22	4:58	11:05	**5:04**	**11:26**
		12.3	3.8	**13.8**	**3.0**			0.9	15.5	**2.1**	**14.6**			14.9	2.0	**15.0**	**0.9**
F	3	1:06	7:24	**1:24**	**7:56**	M	13	3:20	9:32	**4:02**	**10:02**	Th	23	5:36	11:42	**5:43**	.....
		13.1	3.2	**14.6**	**2.1**			1.7	14.9	**2.4**	**13.9**			14.8	2.2	**14.7**	.....
S	4	1:53	8:15	**2:08**	**8:44**	Tu	14	4:23	10:39	**5:06**	**11:16**	F	24	0:02	6:15	**12:20**	**6:20**
		13.9	2.4	**15.4**	**1.1**			2.3	14.6	**2.6**	**13.6**			1.4	14.7	**2.6**	**14.3**
S	5	2:39	9:03	**2:52**	**9:23**	W	15	5:26	11:48	**6:03**	.....	S	25	0:40	6:52	**1:00**	**6:57**
		14.8	1.5	**16.1**	**0.1**			2.7	14.5	**2.5**	.....			1.9	14.4	**3.1**	**13.8**
M	6	3:24	9:49	**3:38**	**10:12**	Th	16	0:23	6:27	**12:47**	**7:03**	S	26	1:19	7:28	**1:45**	**7:34**
		15.5	0.8	**16.6**	**−0.6**			13.7	2.9	**14.7**	**2.2**			2.6	14.1	**3.6**	**13.2**
Tu	7	4:12	10:33	**4:26**	**10:56**	F	17	1:19	7:25	**1:38**	**8:04**	M	27	2:03	8:08	**2:34**	**8:18**
		16.1	0.3	**16.8**	**−1.0**			14.0	2.8	**15.0**	**1.8**			3.2	13.7	**4.0**	**12.7**
W	8	5:01	11:19	**5:17**	**11:41**	S	18	2:08	8:19	**2:24**	**8:53**	Tu	28	2:52	8:50	**3:29**	**9:04**
		16.4	0.1	**16.8**	**−1.0**			14.3	2.6	**15.2**	**1.3**			3.8	13.4	**4.3**	**12.2**
Th	9	5:52	12:06	**6:09**	.....	S	19	2:54	9:06	**3:06**	**9:34**	W	29	3:47	9:44	**4:27**	**10:07**
		16.5	**0.3**	**16.6**	.....			14.6	2.8	**15.3**	**0.9**			4.2	13.2	**4.3**	**12.0**
F	10	0:28	6:44	**12.57**	**7:02**	M	20	3:36	9:48	**3:47**	**10:14**	Th	30	4:44	10:46	**5:24**	**11:20**
		−0.6	16.4	**0.8**	**16.1**			14.7	2.1	**15.3**	**0.7**			4.3	13.3	**4.0**	**12.3**

The tides are placed in the order of their occurrence; the *times* of high and low tides are shown on the upper lines. The figures in boldfaced type are hours and elevations between noon and midnight; *ante meridian* figures are given in the ordinary lightfaced type. The time is Cosmopolitan Standard for the meridian 75° W.

The *elevations* of the water are shown on the second line for each day; a comparison of consecutive heights will indicate whether it is high or low water. Heights are reckoned from mean low water springs, which is 8.3 below mean sea level and is the datum of soundings on the Coast and Geodetic Survey charts for this region. The depth of water may accordingly be estimated by adding the tabular height of the tide to the soundings, unless a minus (−) sign is before the height, in which case it is to be subtracted. The annual inequality or variation in the mean sea level is included in the predictions.

Roosevelt.

A copy of what is known as the best photograph of Theodore Roosevelt has been presented to The Panama Canal by Underwood & Underwood of New York, and will hang in the Board Room of the Administration Building at Balboa Heights among pictures of Canal construction and preconstruction days. The photograph is 22 x 27 inches, appropriately mounted in a fumed oak frame.

Boys! Protect the Trees!

The cooperation of the boys of the Canal Zone is requested in protecting trees and shrubbery from damage.

A few days ago some children used a hatchet on a lime tree on the Prado at Balboa, and nearly killed the tree. Some other children have broken limbs of the wild almond trees on Cruces Avenue, and yet others have damaged the mango trees near the Cable office on the Balboa Road.

Every boy in the Canal Zone is requesed to use his influence in stopping such practices. The trees belong to the boys as much as to anyone; and the boys should help to protect their own property.

Rates at Hotel Aspinwall, Taboga.

BOARD AND LODGING.

Nonemployees:		
Adults	per day	$3.50
Adults, week or month's stay	per day	2.50
Children under 2 years of age		Free
Children, 2 to 5 years, inclusive	per day	1.00
Children, 2 to 5 years, week or month's stay	per day	.80
Children, over 5 years, under 12 years	per day	1.75
Children, over 5, under 12 years, week or month's stay	per day	1.25
Employees:		
Adults	per day	2.75
Adults, week's stay	per day	2.00
Adults, month's stay	per mo.	54.00
Children, under 2 years		Free
Children, 2 to 5 years, inclusive	per day	.75
Children, 2 to 5 years, week or month's stay	per day	.60
Children, 6 years and under 12 years	per day	1.25
Children, 6 years and under 12, week or month's stay	per day	1.00
For employee's family of 4 paying members, or more, staying at the hotel at the same class of rate, a reduction of 10 per cent is allowed, not including servants.		
Servants:		
For nonemployees	per day	1.50
For employees	per day	1.25

The above rates apply to Class B rooms.

Front rooms on the second floor of the main building or second floor of the annex are classed as "Class A" rooms, and an additional charge of 25 cents a day for each person occupying a bed in one of these rooms is made.

Temporary bedrooms are classed as "Class C," and a deduction of 25 cents a day from above rates will be made for an occupant of a bed in these rooms.

Deceased Employee.

The estate of the following deceased employee of The Panama Canal is now in process of settlement, and any claims against this estate, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings, or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estate may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. This name will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Ira Smith	54952	Jamaica	Colon	Supply Department	May 9, 1921.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Panama, Washington."

Official Circulars.

Reduction of Force.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 12, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

Complaints have reached this office that form 494 "Notification of Reduction of Force" is not in all cases being used as the official notification of an employee's discharge on account of reduction of force, and that in other cases the form when issued is not accompanied by a copy of form 194 by means of which the discharged employee applies for steamship transportation.

It is important that *both* of these forms should be furnished to each gold employee who is to be discharged on account of reduction of force, because of the instructions contained therein relative to the procedure to be followed in order to procure his final pay and steamship reservation.

JAY J. MORROW,
Governor.

Building Division Abolished.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 14, 1921.

CIRCULAR NO. 660-52:

Effective June 1, 1921, the Building Division will be abolished and the construction and repair of all buildings and like structures now being performed by that division will be transferred to the Supply Department where it will be in charge of a Constructing Quartermaster.

Such organization and plant of the Building Division that may be required by the Constructing Quartermaster will also be transferred on that date.

Mr. J. B. Fields will be Constructing Quartermaster.

JAY J. MORROW,
Governor.

Vehicle Traffic Regulations.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 18, 1921.

CIRCULAR NO. 717-3 (superseding Circulars 717 and 717-2).

By virtue of the authority conferred on me by Section 1 of the Executive Order of April 14, 1921, relating to licensing of vehicles, road rules, use of lights, tags, and signals, and speed regulations in the Canal Zone, published as Panama Canal circular No. 601-120, the following rules and regulations are hereby prescribed, effective June 1, 1921.

1. No traction engine, steam roller, road engine, hauling machine, trailer, automobile truck, motor vehicle or other vehicle, shall be operated on or over any of the metaled roads or streets of the Canal Zone, the face of the wheels, rollers or treads of which are fitted with flanges, ribs, clamps, cleats, lugs, or spikes, without application having first been made to the Executive Secretary and special written authority therefor secured, which shall be given only after inspection of the vehicle by a representative of the Municipal Engineering Division and after advice by him that such vehicle has been so equipped as to operate over the roads and streets of the Canal Zone without damage to such roads and streets: *Provided*, That this section shall not be construed to prohibit the operation of pneumatic-tired vehicles using tire chains.

2. *Town limits*—The following town limits are prescribed:

(*a*) *Ancon-Balboa*—That area lying within the line beginning at the junction of Tivoli Avenue and Gaillard Highway at the Canal Zone-Panama boundary line, running to and along the Panama Railroad main line to a point just opposite the north end of house No. 34-X, thence southwest to the north end of dock No. 19, thence along the shore line to its intersection with the Canal Zone-Panama boundary line, and thence along the said boundary line to the point of beginning.

(*b*) *Corozal.*—All streets and roads connective with Gaillard Highway and lying within the area beginning at the Diablo railroad crossing and extending north on the said highway to its intersection with Miraflores Road.

(*c*) *Fort Clayton*—All streets and roads connective with Gaillard Highway and lying within the area beginning at the Cardenas River bridge and extending north on the said highway to the transformer house.

(*d*) *Pedro Miguel*—All streets and roads connective with Gaillard Highway and lying within the area beginning at a point on said highway 150 feet south of Red Tank colored school (house No. 553) and extending north on the said highway to a point 150 feet north of Pedro Miguel railroad station.

(*e*) *Paraiso*—All streets and roads connective with Gaillard Highway and lying within the area beginning at the south end of Paraiso railroad station and extending north on the said highway to a point 150 feet north of Paraiso colored school (house No. 381).

(*f*) *Gatun*—All streets and roads connective with Bolivar Highway and lying within the area beginning at the south end of Gatun railroad station and extending north on the said highway to the first concrete culvert north of Fort Davis athletic field.

(*g*) *Cristobal*—That area lying within the line beginning at the intersection of the Canal Zone-Panama boundary line with the shore line at Folk's River and running along the said boundary line to its intersection with the shore line of Limon Bay, thence along the said shore line to the railroad bridge over the old French Canal, thence easterly to the East Diversion bridge on Bolivar Highway, thence northerly along the East Diversion to Folk's River, and thence along the shore line of Folk's River to the point of beginning.

3. *Parking of vehicles*—(*a*) Parking of vehicles is prohibited at all times at the following places where appropriate notice reading "No Parking" is displayed by signboard or on road surface:

Entrances to public buildings.

On any roads and streets.

(*b*) Parking of vehicles without lights is prohibited at the following-named places between 6 p. m. and 6 a. m.:

Mamei Place from San Blas Place to Ancon Boulevard.

Tivoli Avenue from Gorgas Road to Gaillard Highway.

Fourth of July Avenue from Gorgas Road to Balboa Road.

Ancon Boulevard from Tivoli Avenue to Gorgona Road.

Gorgona Road from Ancon Boulevard to Balboa Prado.

Corozal Road from Canal Zone boundary at Corundu River to junction with Gaillard Highway.

Balboa Road from Fourth of July Avenue to Diablo Road.

Diablo Road from Balboa Road to Gaillard Highway.

Gaillard Highway from Tivoli Avenue to the southern limit of Fort Clayton.

Gaillard Highway from the northern limit of Fort Clayton to the southern limit of Pedro Miguel.

Gaillard Highway from the northern limit of Pedro Miguel to Gamboa.

Bolivar Highway from 14th Street, Cristobal, to the northern limit of Gatun.

Randolph Road from its intersection with Bolivar Highway to entrance to Fort Randolph.

(*c*) Parking of vehicles is permitted at all time and without lights on or at the following-named streets and places, as indicated by appropriate notices:

ANCON-BALBOA.

Administration Building, Balboa Heights.
Balboa Railroad Station.
Docks 17 and 19.
Dock 15.
Balboa clubhouse.
Gorgas Road near Ancon post office.
Gorgas Road at Ancon hospital entrance.
Porto Bello Street at Poinciana Plaza.
Mamei Place at Poinciana Plaza.
Ancon clubhouse.
Hotel Tivoli.

CRISTOBAL.

West side of commissary.
Bolivar Street, south of Masonic Temple.
East side of Roosevelt Avenue at Terminal Building.
West side of Broad street south of clubhouse.

4. *One-way streets and roads*—Gorgas Road from Sosa Place to hospital main entrance. No vehicle of any kind will be permitted to use this road in the direction from Panama to the top of the hill except such vehicles as it may be necessary to admit to the grounds on hospital business. Passenger automobiles will be permitted to pass through the hospital grounds from the top of the hill toward Panama provided the engines are cut off and no unnecessary noise in made while passing through the grounds. Trucks, motorcycles, or horse-drawn vehicles will not be permitted to use the road in either direction unless they have business within the hospital grounds. The entrance to the hospital grounds will be indicated by suitable signs. The entrance from the Panama side is just beyond the steps leading to the hospital administration building.

Sosa Place from Darien Place to Gorgas Road.
Culebra Road from Gorgas Road to house No. 284.
Approach and exit to and from Hotel Tivoli.
Frangipani Street from Porto Bello Street to Ancon Boulevard.
Prospect Street from Heights Road to Quarry Road.
Quarry Road from Prospect Street to Heights Road.
Gorgona Road from the head of Balboa Prado to Morgan Avenue.
North side of Balboa Prado from Balboa Road to dispensary.
Pier 18 approach from Balboa Road to pier entrance.
Dock 17 from pier 18 entrance to dock 16.
Approach and exit to and from Administration Building.
Approaches and exits to and from Balboa railroad station.

5. Any person violating these regulations will be subject to prosecution, and upon conviction, may be punished by fine not to exceed $25, or by imprisonment in jail not to exceed 30 days, or by both such fine and imprisonment, in the court's discretion, as provided by the Act of Congress approved August 21, 1916.

JAY J. MORROW,
Governor.

Sale of Tug "Sanidad."

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., May 31, 1921, and then opened for the purchase of the tug *Sanidad.* Description and form of proposal may be had upon application. The Panama Canal reserves the right to reject any or all bids.

Sale of Barge No. 222.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., May 31, 1921, and then opened, for the purchase of steel barge *No. 222.* Description and form of proposal may be had upon application. The Panama Canal reserves the right to reject any or all bids.

PACIFIC TO ATLANTIC—Continued from page 615.
(Figures represent tons of 2,240 pounds.)

Commodity.	From—								To—					
	Total.	West coast of Central America.	West coast of Canada.	Australasia.	Far East.	West coast of United States.	West coast of South America.	East coast of United States.	British Isles.	Other Europe.	Cristobal, C. Z.	West Indies.	Mexico.
Sugar	8,379	38				5,400	2,941	7,711	630		38		
Talc	27					27		27					
Tea	144				144			144					
Tobacco	155			114	41			121		34			
Vegetables	135					135		135					
Wheat	39,108			11,869	4,890	21,151	1,198		26,810	12,298			
Wood, dye	20						20			20			
Wool	16,384			8,085	135	4,413	3,751	8,189	8,085	82	28		
General	24,965	119		281	5,043	19,264	258	23,033	1,443	304	185		
Totals	406,812	4,906	7,270	79,973	16,045	141,129	157,489	174,811	126,077	93,818	8,562	589	955

Misdirected Letters.

BALBOA HEIGHTS, C. Z., May 14, 1921.

Insufficiently addressed mail matter for the following has been received in the office of the Director of Posts and may be obtained upon request of the addressees. Request for forwarding may be made by telephone, calling No. 182 Balboa:

Aischleman, Ernest
Boucher, Miss Mabel
Bowen, Edgar A.
Beese, Theodore, c/o Henry A. Grove
Cavanaugh, Frank
Clendaniel, Miss Annie
Cudlipp, Dr. Ralph L.
Cueto, Miss Aura
Franchie, A. V. W.
Garza, Daniel P.
Gertlin, Maurice
Howard, L. D., Box 199
Hunter, O. R.
Jones, Charles Mack (4)
McIntosh, Noel
McIntyre, E. J.
McKenn, R. T.; Box 651.
Mixon, E. E.
Morlock, William (3)
Nowatney, Will W.
Olsen, Earl, Box 56.
Overton, Fred
Pieres, Jacob
Ruman, C. G.
Samson, Wilfred G.
Smith, Benj. R., Box 825.
Suarez, Miss Ethlin
Thompson, W. G., Box 735
Williams, Mrs. Kate, Box 179 (2).

Empty Barrels for Sale.

Address inquiries to Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z.

Sale of Typewriters.

The Panama Canal has for sale a number of used Underwood typewriters at reasonable prices. Some of these machines are at Balboa storehouse and others at Cristobal storehouse, where they may be inspected and purchased direct.

Sale of Lumber.

The Panama Canal has on hand at Balboa storehouse considerable quantities of 1″ x 6″, 1″ x 8″, and 1″ x 10″ dressed lumber, Douglas fir, grade 1, select common. Further information will be furnished by General Storekeeper, Balboa, or at office of Chief Quartermaster, Balboa Heights.

April Rainfall for Three Years.

STATIONS.	INCHES. 1919	1920	1921	Station average.	Years of record.	Rainy days, 1921.
Pacific section:						
Balboa	6.32	3.54	1.90	3.82	23	7
Balboa Heights	6.43	3.02	1.19	3.00	23	5
Miraflores	5.79	3.60	1.91	4.08	13	2
Pedro Miguel	6.58	5.08	1.17	4.25	14	3
Rio Grande	6.44	1.30	.61	3.34	17	6
Central section:						
Culebra	7.41	1.20	.42	3.62	81	5
Camacho	8.52	1.81	.58	3.46	15	5
Empire	7.52	1.51	.65	3.40	17	6
Gamboa	7.02	1.48	1.16	3.57	40	12
Juan Mina	13.62	1.46	2.38	4.03	11	18
Alhajuela	9.06	.83	.96	3.54	22	13
Vigia	10.02	.64	1.41	3.39	13	6
Frijoles	10.07	.06	4.87	4.61	10	....
Trinidad	6.34	1.13	2.16	4.60	14	11
Monte Lirio	11.66	.08	6.63	5.40	14	12
Atlantic section:						
Gatun	12.04	.14	4.69	5.59	17	14
Brazos Brook	12.48	.35	5.28	5.24	15	13
Colon	10.95	1.72	7.43	4.35	51	16
Porto Bello	30.21	2.67	6.61	7.73	10	25
Bocas del Toro	7.22	3.06	6.04	7.93	13	20

Additions to Commissary Stock.

Dry Goods Section.

Hose, women's, white combed lisle, pr..... $0.37

Grocery Section.

Cleanser, "Sunbright," 14-oz. tin..... .08
Starch, Tiger, 1s carton ..... .08
Vermicol, tin 1.33

COMMISSARY NOTES.

Chinaware.

A large shipment of Steubenville china in all of the patterns now carried in the commissaries has just been received and distributed to the line stores.

Books.

Books received:

"Morning, Noon, and Night," "In Paths of the Wind," "The Road to Everywhere," all by Glen Ward Dresbach.

Alligator Pears.

Alligator pears from the Frijoles plantation are now on sale in the commissaries. These are shipped directly to the stores and care is exercised in the gathering of the fruit so that only well-matured pears are offered.

Sheet Music.

A shipment of sheet music consisting of selections from current musical productions in the United States and of other numbers which are meeting with much favor at present, placed on sale recently, moved rapidly. Many good pieces are still available for purchase.

Price Reductions—Shirts.

Sweeping reductions in the prices of shirts were made effective as of May 12. Included in the numbers affected were the best qualities carried. An evening dress shirt, formerly retailed at $3.30, is now available at $2.25. A fine quality white cheviot for outing wear has been reduced from $3.65 to $3, and there are offered at $3.45 imported striped madras shirts, some of which formerly sold for as high as $5.40. Other shirts in corded madras, striped percale, soisette, and flannel may also be obtained at comparatively low figures.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates, domestic, $1.00 per year; foreign, $1.50; address The Panama Canal Record, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Volume XIV. Balboa Heights, C. Z., May 25, 1921. No. 41.

Spanish Battleship "Espana."

The Spanish battleship *España* is now in Balboa dry dock undergoing repairs to hull where damaged when she grounded off the coast of Chile as described in an article in THE PANAMA CANAL RECORD of April 27, 1921.

Upon docking the battleship it was found that the damage to the bottom extends from frames 18 to 92, a distance of approximately 150 feet, the shell plating, frames, and tank tops being badly dented and distorted. The outer plating was badly holed from frames 22 to 36, approximately 8 to 10 feet each side of the center line of the ship, with smaller holes on the port side from frames 48 to 56 and on the starboard side from frames 58 to 76. The last two mentioned localities are farther from the center line and much smaller in extent.

Temporary repairs made by divers consisted of driving wooden wedges through all the holes, temporary water-tightness being secured by using canvas, tallow, and powdered charcoal. Concrete was poured in the wake of the damage and in several cases carried up above the tank top. Wooden shoring and temporary steel bracing was installed from the tank top to the deck above in the wake of the worst damage, which was approximately under No. 1 magazine and anchor windlass and engine. The above work was done in southern waters shortly after the accident and it appears to have been very well performed.

The Mechanical Division is now engaged in cutting out the damaged shell plating, framing, and tank tops, and removing the cement. Due to the break in butts, it is necessary to remove work beyond the localities mentioned and described in the damage, so that actually the ship will be opened up to a certain extent from frames 10 to 96 on the starboard side and from frames 14 to 65 on the port side. Shell plates will be removed on the starboard side up to and including G strake at the after extremity of the damage, and to and including D strake on the port side at the afterend of the damaged section in this locality. The inner bottom will require complete renewal from frames 22 to 36 and approximately 50 per cent of the inner bottom plating will require renewal aft of this point.

Only a few of the present frames, both Z-bars and angles, will be repaired and replaced. The bulk of the frames are so badly distorted as to require renewals up to points which will carry them beyond the damaged section and allow making butts without in any way weakening the structural strength of the ship.

The vertical keel, intercostals, and floors are badly crumpled, so that only a very small percentage of these members can be reused.

When the ship grounded the force of the impact was transmitted through stanchions to two decks above, resulting in bulging the deck, on which the anchor windlass engine and vertical shaft are located, to such an extent that the machinery was thrown out of line and

rendered almost inoperative. On disassembling the gear and crankshaft of the engine some distortion has been found in this machinery, which has made it necessary to do considerable shopwork before it can be properly lined up.

Incident to the hull damage a considerable amount of piping, such as bilge and ballast system, vent, sounding and filling lines, and sluice valves will require extensive repairs.

Advantage is being taken of the time required for repairs to the hull damage to clean and paint the bottom and top sides of the ship, renew hull zincs and repair fairwaters on propeller shaft struts, overhaul sea valves, overhaul rudder, rebuild one ash hoist trunk, manufacture one boat boom, repair and rerivet the torpedo net platform, and to perform miscellaneous repairs of a minor nature in the engineering department, the principal items of which are renewing section of the bottom and surface blow lines and ash ejector dischage pipes, manufacturing evaporator coils, overhauling valve gear on one pump and renewing water end plugs on 6 pumps, repairing circulating water discharge line to auxiliary condenser, repairing salt water suction line to lubricating oil-cooling pump, and installing valves on feed and filter tanks.

CANAL WORK IN APRIL.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of April, 1921:

BALBOA HEIGHTS, C. Z., May 14, 1921.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of The Panama Canal for the month of April, 1921:

CANAL TRAFFIC.

The total number of vessels and craft of all kinds through the Canal as compared with the preceding month, and with the corresponding month of last year, was as follows:

	April, 1921.	March, 1921.	April, 1920.
Commercial vessels	227	255	235
United States Government vessels	27	37	9
Launches (under 10 tons)	9	11	2
Total vessels and craft	263	303	246

COMMERCIAL TRAFFIC.[1]

A comparison of this month's commercial traffic with that of the preceding month, of the corresponding month of 1920, and of the average month's traffic for the past 12 months shows the following:

Panama Canal net tonnage:	
April, 1921	955,503
March, 1921	1,112,818
April, 1920	822,471
Average month, for the past year	945,576
Registered gross tonnage:	
April, 1921	1,203,087
March, 1921	1,417,220
April, 1920	1,050,481
Average month, for the past year	1,205,952
Registered net tonnage:	
April, 1921	757,576
March, 1921	917,441
April, 1920	674,565
Average month, for the past year	767,164

[1] Commercial traffic includes all vessels of 10 tons or more transiting the Canal, with the exception of vessels owned by the United States Government, or chartered by the Government to carry Government supplies.

Tolls earned:	
April, 1921	$927,977.09
March, 1921	1,105,536.55
April, 1920	805,571.50
Average month, for the past year	936,219.21
Tons of cargo carried:	
April, 1921	907,613
March, 1921	1,084,563
April, 1920	867,521
Average month, for the past year	993,425

Ocean-going commercial vessels passing through the Canal averaged 7.6 ships per day. The average tonnage, tolls, and tons of cargo carried, per commercial vessel, as compared with last month's traffic, were as follows:

Average per vessel.	This month.	Last month.
United States equivalent net tonnage	3,397	3,624
Panama Canal net tonnage	4,209	4,364
Registered gross tonnage	5,299	5,557
Registered net tonnage	3,337	3,597
Tolls	$4,088.01	$4,335.44
Tons of cargo (all vessels)	3,998	4,645
Tons of cargo (laden vessels only)	4,561	4,844

TOLLS PAID PER CARGO TON BY NATIONALITY OF VESSELS.

The average rate of tolls paid on each ton (2,240 pounds) of cargo passing through the Canal from the Atlantic to the Pacific was $0.98 per ton, and from the Pacific to the Atlantic the rate was $1.07 per ton, with a general average of $1.02 per ton. The average rate paid per cargo ton by nationality of vessels is shown in the following statement:

	Atlantic to Pacific.	Pacific to Atlantic.	General average.
British	$1.03	$1.19	$1.09
Chilean	1.86	32.81	3.53
Danish	2.44	.73	.91
Dutch	3.56	.78	1.27
Finnish	.....	.70	.70
French	8.86	.69	.93
German	.88	.....	.88
Italian	.....	6.99	6.99
Japanese	.76	.96	.86
Norwegian	.73	.88	.78
Peruvian	3.18	.82	1.17
Russian	.....	.69	.69
Swedish	(1)	.47	1.19
United States	.91	1.18	1.02
Average rate, all ships, April	.98	1.07	1.02
Average rate, all ships, March	.97	1.05	1.00
Average rate, all ships, February	.94	.97	.96

[1] Tolls paid but no cargo carried southbound.

In the computation of the rate of tolls paid per ton of cargo through the Canal, as shown in the above table, tolls paid on warships, passenger ships, yachts, and other noncargo-carrying vessels have been eliminated, but tolls paid on cargo-carrying ships passing through the Canal in ballast have been included. The difference in the rate of tolls paid per cargo ton by ships of various nationalities is due to the fact that some ships passed through the Canal in ballast, others but partially loaded, while others were carrying capacity cargoes.

The lowest rate of tolls paid per cargo ton by any vessel passing through the Canal during the month, was a rate of 42 cents, paid by the steamship *Herakles*, flying the Norwegian flag, bound from Antofagasta to Philadelphia, and carrying 8,040 tons of nitrate, on which tolls of $3,382.50 were assessed.

COMMODITY STATISTICS.

A classification of all cargo passing through the Canal, by commodities, giving the origin and destination of same, has been previously compiled, and was published in THE PANAMA CANAL RECORD, under date of May 18, 1921. A brief summary of the principal items is given herewith.

CARGO PASSING FROM ATLANTIC TO PACIFIC.

Commodity.	Tons.	Per cent of total cargo.	
		This month	Last month
Oils:			
Crude	112,257	32.0	35.0
Refined	48,126		
Manufactured goods:			
Iron and steel	78,645	20.5	16.0
Machinery and railroad equipment	16,169		
Other	7,205		
Coal and coke	39,915	8.0	14.0
Sugar	25,216	5.0	6.0
Metals	15,396	3.0	0.5
Sulphur	7,850	1.5	2.0
Cement	5,412	1.0	1.0
Tobacco	3,880	0.7	0.5
Other and general	140,730	28.3	25.0

CARGO PASSING FROM PACIFIC TO ATLANTIC.

Nitrate	118,729	30.0	31.0
Wheat	39,108	10.0	13.0
Cold storage	43,924	11.0	5.0
Lumber	23,339	6.0	5.0
Oil, refined	20,608	5.0	5.0
Wool	16,384	4.0	1.0
Flour	17,549	4.0	3.0
Ore (copper, 8,259 tons)	14,752	3.5	0.5
Metals (copper, 12,494 tons)	13,478	3.0	4.0
Canned goods	12,729	3.0	2.0
Barley	12,152	3.0	4.0
Sugar	8,379	2.0	2.0
Other and general	65,681	15.5	24.5

UNITED STATES COASTWISE TRAFFIC.

Included in the April traffic were 33 vessels, engaged in the United States coastwise trade, combining an aggregate Panama Canal net tonnage of 160,401, and carrying 153,790 tons of cargo. Of these vessels, 19 passed from the Atlantic to the Pacific with a total Panama Canal net tonnage of 92,033 and carrying 94,484 tons of cargo; and 14 passed from the Pacific to the Atlantic, with a total Panama Canal net tonnage of 68,368, and carrying 59,306 tons of cargo. Tolls on the above vessels aggregated $159,708.74.

UNITED STATES SHIPPING BOARD VESSELS.

Twenty-five vessels under the control of the United States Shipping Board passed through the Panama Canal during the month. Of these vessels, 13 passed from the Atlantic to the Pacific, with a total Panama Canal net tonnage of 61,176, and carrying 60,231 tons of cargo; and 12 passed from the Pacific to the Atlantic, with a total Panama Canal net tonnage of 56,049, and carrying 52,908 tons of cargo. The tolls on the above vessels aggregated $114,752.18.

TRADE ROUTES.

Statements attached to this report show the origin and destination of all cargo passing through the Panama Canal as nearly as the same can be segregated from the data available (*see* pages 644 and 645). Below is given a summary of the traffic passing over the principal trade routes, showing the number of vessels, their Panama Canal net measurement, and the amount of cargo carried. The vessels shown as in ballast represent cargo-carrying ships only, warships, tugs, etc., not being included as "ballast."

Trade routes.	Total vessels.			Vessels in ballast.	
	Number.	Panama Canal net tonnage.	Cargo.	Number.	Panama Canal net tonnage.
Atlantic to Pacific.					
United States coastwise	19	92,033	94,484	.....	.....
East coast of United States to west coast of South America	14	46,937	45,949	.....	.....
East coast of United States to Far East	12	65,424	80,674	.....	.....
Europe to west coast of South America	12	46,786	24,944	1	2,252
Cristobal to west coast of South America	10	14,021	3,908	1	69

Trade routes.	Total vessels.			Vessels in ballast.	
	Number.	Panama Canal net tonnage.	Cargo.	Number.	Panama Canal net tonnage.
Atlantic to Pacific—Continued.					
East coast of United States to Australasia	9	48,315	65,621	.....	.....
Europe to Australasia	8	51,238	31,792	2	11,161
East coast of Mexico to west coast of South America	5	25,777	46,368	.....	.....
Europe to west coast of United States	5	24,706	10,284	1	4,618
Europe to west coast of Canada	3	9,110	5,413	2	5,102
East coast of South America to west coast of United States	3	7,727	6,032	2	3,553
Cristobal to west coast of United States	3	6,215	1,664	.....	.....
Mexico to west coast of United States	2	10,903	20,500	.....	.....
West Indies to Far East	2	8,289	14,145	.....	.....
Canada to Australasia	2	9,532	9,150	.....	.....
East coast of South America to west coast of South America	2	2,101	639	.....	.....
Cristobal to Central America	2	1,610	1,067	.....	.....
Miscellaneous trade routes	5	21,782	38,167	.....	.....
Totals	118	492,506	500,801	9	26,755
Totals for March, 1921	140	613,591	636,579	5	10,168
Totals for April, 1920	110	407,968	398,568	23	79,250
Pacific to Atlantic.					
West coast of South America to east coast of United States	24	83,069	90,765	4	14,939
United States coastwise	14	68,368	59,306	2	10,982
Australasia to Europe	12	81,786	69,692	.....	.....
West coast of South America to Europe	10	47,192	60,516	.....	.....
West coast of South America to Cristobal	10	16,677	5,356	.....	.....
West coast of United States to Europe	9	40,491	63,763	.....	.....
Far East to east coast of United States	6	29,756	11,303	1	4,841
West coast of United States to east coast of Mexico	5	26,880	955	4	21,720
West coast of South America to east coast of Mexico	4	21,025	.....	4	21,025
West coast of Canada to Europe	3	16,267	22,827	.....	.....
West coast of United States to Cristobal	2	3,756	1,994	.....	.....
West coast of Central America to Cristobal	2	1,610	940	.....	.....
Miscellaneous trade routes	8	26,120	19,395	4	11,756
Totals	109	462,997	406,812	19	85,263
Totals for March, 1921	115	499,227	447,984	21	113,649
Totals for April, 1920	110	414,503	468,953	15	56,825

LATIN-AMERICAN TRAFFIC.

The number of vessels, tonnage, and tons of cargo carried by the vessels, engaged in the Latin-American trade, classified by nationality, were as follows:

ATLANTIC TO PACIFIC.

Nationality.	No. of vessels	Tonnage.				Tolls.	Cargo.
		United States equivalent.	Panama Canal net.	Registered gross.	Registered net.		
United States	18	49,765	62,739	78,737	50,688	$62,206.25	80,048
British	20	45,549	58,375	76,209	46,451	56,943.73	55,572
Norwegian	8	22,579	25,915	34,587	21,857	26,724.83	36,647
Dutch	3	8,001	13,050	12,825	8,032	10,001.25	2,807
Peruvian	3	4,737	7,597	12,307	6,510	5,020.19	1,577
Japanese	2	7,447	8,289	10,593	7,332	9,308.75	14,145
French	1	3,566	4,081	5,681	3,600	4,447.50	503
Danish	1	3,127	4,090	4,950	3,163	3,908.75	3,000
Chilian	1	1,811	3,182	3,798	2,272	2,263.75	1,214
German	1	1,118	1,361	2,064	1,182	1,397.50	1,600
Totals	58	147,700	188,679	241,751	151,087	182,232.50	197,113
March, 1921	67	199,703	240,486	315,677	200,306	247,013.95	296,193
April, 1920	66	.....	203,096	265,248	170,689	.....	135,203

PACIFIC TO ATLANTIC.

United States	21	64,629	77,092	103,249	63,902	$63,262.88	21,220
British	22	52,624	64,791	86,306	52,361	62,424.18	60,851
Japanese	5	16,718	20,030	25,616	16,496	20,717.90	35,454
Norwegian	4	13,640	16,658	21,517	13,551	13,294.91	12,442

PACIFIC TO ATLANTIC—continued.

Nationality.	No. of vessels	Tonnage.				Tolls.	Cargo.
		United States equivalent.	Panama Canal net.	Registered gross.	Registered net.		
French	2	6,881	7,907	10,857	6,951	$8,601.25	11,620
Peruvian	2	2,719	5,345	9,020	4,517	3,398.75	4,163
Italian	1	4,495	4,659	5,940	3,905	5,590.80	800
Russian	1	3,375	3,940	5,236	2,398	4,218.75	6,119
Dutch	1	3,320	5,466	5,248	3,762	4,150.00	3,700
Finnish	1	2,031	2,025	2,215	2,070	2,430.00	3,490
Chilean	1	1,811	3,182	3,798	2,272	2,263.75	69
Danish	1	1,523	1,492	1,955	1,208	1,790.40	945
Totals	62	173,766	212,587	280,957	173,393	192,143.57	160,873
March, 1921	73	223,131	270,585	350,342	224,200	241,370.51	200,937
April, 1920	69	.....	218,294	280,151	177,460	.....	243,899

CLASSIFICATION OF COMMERCIAL TRAFFIC.[1]

A statement of this month's commercial traffic, classified (1) according to the nationality of the various ships passing through the Panama Canal, and (2) segregating laden and unladen vessels, is shown in the following tabulations:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Number and nationality of commercial vessels passing through the Canal:			
British	46	34	80
Chilean	1	1	2
Danish	2	4	6
Dutch	3	2	5
Finnish	.....	1	1
French	1	3	4
German	1	.....	1
Italian	.....	1	1
Japanese	6	9	15
Norwegian	8	5	13
Peruvian	3	2	5
Russian	.....	1	1
Swedish	1	1	2
United States	46	45	91
Totals, April, 1921	118	109	227
Totals, March, 1921	140	115	255
Totals, April, 1920	110	110	220
United States equivalent net tonnage of commercial vessels passing through the Panama Canal, by nationality:			
British	156,312	119,397	275,709
Chilean	1,811	1,811	3,622
Danish	7,694	15,208	22,902
Dutch	8,001	8,180	16,181
Finnish	.....	2,031	2,031
French	3,566	9,145	12,711
German	1,118	.....	1,118
Italian	.....	4,495	4,495
Japanese	25,839	34,214	60,053
Norwegian	22,579	15,877	38,456
Peruvian	4,737	2,719	7,456
Russian	.....	3,375	3,375
Swedish	3,468	2,248	5,716
United States	162,443	154,848	317,291
Totals, April, 1921	397,568	373,548	771,116
Totals, March, 1921	514,468	409,841	924,309
Totals, April, 1920	341,330	340,328	681,658
Panama Canal net tonnage of ships passing through the Panama Canal by nationality:			
British	195,139	144,544	339,683
Chilean	3,182	3,182	6,364
Danish	8,708	17,502	26,210
Dutch	13,050	11,534	24,584

[1] Commercial traffic includes all ocean-going vessels transiting the Canal excepting vessels owned or chartered by the United States Government.

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Panama Canal net tonnage of ships passing through the Panama Canal by nationality—Continued.			
Finnish	.....	2,025	2,025
French	4,081	10,840	14,921
German	1,361	.....	1,361
Italian	.....	4,659	4,659
Japanese	27,837	40,544	68,381
Norwegian	25,915	20,425	46,340
Peruvian	7,597	5,345	12,942
Russian	.....	3,940	3,940
Swedish	5,346	4,089	9,435
United States	200,290	194,368	394,658
Totals, April, 1921	492,506	462,997	955,503
Totals, March, 1921	613,591	499,227	1,112,818
Totals, April, 1920	407,968	414,503	822,471
Registered gross tonnage of ships passing through the Panama Canal by nationality:			
British	243,485	179,469	422,954
Chilean	3,798	3,798	7,596
Danish	10,923	22,410	33,333
Dutch	12,825	12,899	25,724
Finnish	.....	2,215	2,215
French	5,681	14,420	20,101
German	2,064	.....	2,064
Italian	.....	5,940	5,940
Japanese	35,953	53,017	88,970
Norwegian	34,587	25,177	59,764
Peruvian	12,307	9,020	21,327
Russian	.....	5,236	5,236
Swedish	5,788	3,767	9,555
United States	248,407	249,901	498,308
Totals, April, 1921	615,818	587,269	1,203,087
Totals, March, 1921	784,748	632,472	1,417,220
Totals, April, 1920	521,017	529,464	1,050,481
Registered net tonnage of commercial ships passing through the Panama Canal by nationality:			
British	151,401	111,752	263,153
Chilean	2,272	2,272	4,544
Danish	7,748	14,913	22,661
Dutch	8,032	8,558	16,590
Finnish	.....	2,070	2,070
French	3,600	9,244	12,844
German	1,182	.....	1,182
Italian	.....	3,905	3,905
Japanese	24,242	33,367	57,609
Norwegian	21,857	15,772	37,629
Peruvian	6,510	4,517	11,027
Russian	.....	2,398	2,398
Swedish	4,300	2,865	7,165
United States	159,997	154,802	314,799
Totals, April, 1921	391,141	366,435	757,576
Totals, March, 1921	506,842	410,599	917,441
Totals, April, 1920	338,932	335,633	674,565
Tolls levied against commercial ships passing through the Panama Canal, by nationality:			
British	$194,172.74	$144,315.55	$338,488.29
Chilean	2,263.75	2,263.75	4,527.50
Danish	7,334.00	18,890.40	26,224.40
Dutch	10,001.25	10,225.00	20,226.25
Finnish	.....	2,430.00	2,430.00
French	4,457.50	11,431.25	15,888.75
German	1,397.50	.....	1,397.50
Italian	.....	5,590.80	5,590.80
Japanese	31,745.40	42,587.90	74,333.30
Norwegian	26,724.83	16,091.16	42,815.99
Peruvian	5,020.19	3,398.75	8,418.94
Russian	.....	4,218.75	4,218.75
Swedish	4,335.00	2,810.00	7,145.00
United States	203,053.75	173,217.87	376,271.62
Totals, April, 1921	490,505.91	437,471.18	927,977.09
Totals, March, 1921	635,165.10	470,371.45	1,105,536.55
Totals, April, 1920	399,716.09	405,855.41	805,571.50

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Tons of cargo carried by commercial ships passing through the Panama Canal, by nationality:			
British	188,852	121,400	310,252
Chilean	1,214	69	1,283
Danish	3,000	25,756	28,756
Dutch	2,807	13,161	15,968
Finnish	.....	3,490	3,490
French	503	16,453	16,956
German	1,600	.....	1,600
Italian	.....	800	800
Japanese	41,568	44,557	86,125
Norwegian	36,647	18,184	54,831
Peruvian	1,577	4,163	5,740
Russian	.....	6,119	6,119
Swedish	.....	6,000	6,000
United States	223,033	146,660	369,693
Totals, April, 1921	500,801	406,812	907,613
Totals, March, 1921	636,579	447,984	1,084,563
Totals, April, 1920	398,568	468,953	867,521
A further classification of above vessels showing laden and unladen ships:			
Cargo ships, laden	109	90	199
Cargo ships, ballast	8	19	27
Cargo ship, unladen, excess fuel	1	.....	1
Total commercial vessels	118	109	227
Net tonnage of above, Panama Canal net measurement:			
Cargo ships, laden	465,751	377,734	843,485
Cargo ships, ballast	20,940	85,263	106,203
Cargo ship, unladen, excess fuel	5,815	.....	5,815
Total Panama Canal net tonnage	492,506	462,997	955,503
Tolls paid on above ships:			
Cargo ships, laden	$468,661.45	$375,858.05	$844,519.50
Cargo ships, ballast	15,693.21	61,613.13	77,306.34
Cargo ship, unladen, excess fuel	6,151.25	.....	6,151.25
Total tolls, commercial ships	490,505.91	437,471.18	927,977.09
Motor ships through the Canal	4	6	10
Net tonnage of above, Panama Canal measurement	9,917	.17,292	27,209
Sailing vessels through the Canal	1	1	2
Net tonnage of above, Panama Canal measurement	854	2,025	2,879
Cargo carried by commercial vessels	500,801	406,812	907,613
Tolls levied, cargo ships only	$490,505.91	$437,471.18	$927,977.09
Average tolls per ton of cargo [1]	$0.98	$1.07	$1.02
Average tolls per ton of cargo [2]	.92	.92	.92

[1] Including cargo-carrying ships in ballast.
[2] Including laden vessels only.

CLASSIFICATION OF NONCOMMERCIAL TRAFFIC.[1]

The following statement shows the tonnage of, and amount of cargo carried by United States Government vessels through the Canal during the month of April, 1921. This traffic passes through the Canal free of tolls; if tolls had been assessed against these vessels at commercial rates, the amounts collected would have been as indicated below.

There is also included in this statement the number and tonnage of launches through the Canal, together with tolls collected thereon. Although paying tolls they are included in the noncommercial traffic, being small nonseagoing vessels under 10 tons net measurement.

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
United States Navy vessels:			
Submarines	1	4	5
Subchasers	5	4	9
Collier	1	.....	1

[1] Vessels, barges, tugs, launches, etc., in the service of The Panama Canal are not included in this statement of traffic.

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
United States Navy vessels—Continued.			
Destroyer	.....	1	1
Supply ship	1	.....	1
Vessels with naval supplies	4	1	5
Total naval vessels	12	10	22
United States Army vessels:			
Mine planters	1	1	2
Launches	2	1	3
Total Army vessels	3	2	5
Tonnage of above vessels:			
Displacement tonnage—			
Naval vessels	20,130	4,396	24,526
Panama Canal net tonnage—			
Naval vessels	2,564	.....	2,564
Army vessels	423	53	476
Vessels with naval supplies	15,867	6,930	22,797
Cargo carried by above vessels:			
Navy vessels ..... tons	13,900	.....	13,900
Vessels with naval supplies ..... tons	21,314	.....	21,314
Total cargo through Canal free of tolls	35,214	.....	35,214
Tolls that would accrue from above, computed at rates for commercial vessels:			
Naval vessels	$11,788.85	$2,198.00	$13,986.85
Army vessels	305.16	38.46	342.62
Vessels with naval supplies	16,229.70	4.989.60	21.219.30
Total	28,323.71	7,226.06	35,549.77
Launches through the Canal	5	4	9
Net tonnage of above, Panama Canal measurement	24	6	30
Tolls collected on above	$26.20	$4.50	$30.70

STATEMENT OF OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal are shown in the following tabulations:

	Cristobal.	Balboa.	Total.
Vessels passing through the Canal:			
Commercial	118	109	227
United States Government	15	12	27
Launches (under 10 tons)	5	4	9
Total vessels and craft	138	125	263
Tonnage of above vessels:			
Commercial—			
Panama Canal net	492,506	462,997	955,503
United States Government—			
Panama Canal net	18,854	6,983	25,837
Displacement tonnage	20,130	4,396	24,526
Launches—			
Panama Canal net	24	6	30
Cargo carried by above vessels:			
Commercial ..... tons	500,801	406,812	907,613
United States Government ..... tons	35,214	.....	35,214
Total cargo through the Canal ..... tons	536,015	406,812	942,827
Deck cargo included in the above ..... tons	97	2,206	2,303
Vessels entering port but not transiting Canal:			
Number entering	56	6	62
Number clearing	57	6	63
Registered gross tonnage of above:			
Entering	286,375	21,743	308,118
Clearing	271,462	21,743	293,205
Registered net tonnage of above:			
Entering	175,200	14,094	189,294
Clearing	165,961	14,094	180,055

	Cristobal.	Balboa.	Total.
Vessels transiting Canal and handling passengers or cargo at port:			
Number entering	47	38	85
Number clearing	44	38	82
Registered gross tonnage of above:			
Entering	197,588	148,558	346,146
Clearing	192,349	148,558	340,907
Registered net tonnage of above:			
Entering	119,738	87,262	207,000
Clearing	116,893	87,262	204,155
All vessels entering and clearing at Canal ports, including those transiting the Canal:			
Number entering	282	239	521
Number clearing	279	237	516
Registered gross tonnage of above:			
Entering	1,526,535	1,278,195	2,804,730
Clearing	1,501,564	1,244,950	2,746,514
Registered net tonnage of above:			
Entering	955,977	799,486	1,755,463
Clearing	942,047	781,854	1,723,901
Transit cargo arriving	944,482	925,882	1,870,364
Transit cargo clearing	943,150	911,764	1,854,914
Local cargo arriving	33,815	25,807	59,622
Local cargo shipped	2,319	215	2,534
Cargo received for transshipment	15,073	312	15,385
Cargo transshipped	14,877	50	14,927
Cargo handled by Receiving and Forwarding Agency, Panama Railroad:			
Received ... tons	32,318	6,191	38,509
Dispatched ... tons	22,224	587	22,811
Rehandled ... tons	2,038	478	2,516
Stevedored ... tons	25,341	1,175	26,516
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad	77	10	87
Panama Railroad vessels	4	.....	4
United States Army vessels	3	1	4
Total vessels supplied with coal	84	11	95
Coal supplied to above vessels:			
Commercial, other than Panama Railroad ... tons	27,090	1,751	28,841
Panama Railroad vessels ... tons	567	.....	567
United States Army vessels ... tons	88	64	152
Total coal supplied to vessels ... tons	27,745	1,815	29,560
Coal issues, miscellaneous:			
Panama Canal departments ... tons	918	507	1,425
Panama Railroad departments ... tons	211	139	350
United States Army, excepting vessels ... tons	93	.....	93
Individuals and companies ... tons	386	.....	386
Total coal furnished from Panama Canal deposits ... tons	29,353	2,461	31,814
Coal on hand, May 1, 1921 ... tons	177,018	22,107	199,125
Coal on hand, April 1, 1921 ... tons	206,371	24,568	230,939
United States Navy coal account.			
Issued to United States Navy, including vessels ... tons	870	1,519	2,389
Coal on hand, May 1, 1921 ... tons	64,564	19,151	83,715
Coal on hand, April 1, 1921 ... tons	53,326	8,672	61,998
Coal received during April, 1921 ... tons	12,108	11,998	24,106
Vessels supplied with fuel oil from Panama Canal tanks	1	.....	1
Fuel oil supplied to above vessels ... bbls	554	.....	554
Fuel oil issues, miscellaneous:			
To Panama Canal departments ... bbls	7,606	19,490	27,096
To Panama Railroad departments ... bbls	597	.....	597
To Army and Navy ... bbls	343	300	643
Total issues ... bbls	9,100	19,790	28,890
Fuel oil on hand, May 1, 1921 ... bbls	106,308	46,962	153,270
Fuel oil on hand, April 1, 1921 ... bbls	115,408	66,752	182,160
Diesel oil issues during the month ... bbls	210	25	235
Diesel oil on hand, May 1, 1921 ... bbls	53,156	1,026	53,182
Diesel oil on hand, April 1, 1921 ... bbls	53,366	1,051	54,417
Fuel oil pumped for individuals and companies at 4 cents per barrel ... bbls	220,315	138,411	358,726
Miscellaneous transfers ... bbls	1,914	743	2,657
Total oil handled ... bbls	231,539	158,969	390,508

	Cristobal.	Balboa.	Total.
Vessels furnished with commissary supplies:			
Commercial	144	76	220
Panama Railroad vessels	9	2	11
United States Government vessels	10	12	22
Total vessels furnished supplies	163	90	253
Commissary sales to commercial vessels:			
Ice	$3,079.30	$717.15	$3,796.45
Wholesale groceries	5,093.00	1,470.84	6,563.84
Cold storage	26,696.52	9,418.74	36,115.26
Laundry	3,403.89	550.16	3,954.05
Miscellaneous	1,309.43	745.75	2,055.18
Total	39,582.14	12,902.64	52,484.78
Commissary sales to Panama Railroad vessels:			
Ice	$97.20	$4.80	$102.00
Wholesale groceries	499.04	130.35	629.39
Cold storage	4,006.11	497.05	4,503.16
Laundry	1,699.63	.....	1,699.63
Miscellaneous	690.57	49.22	739.79
Total	6,992.55	681.42	7,673.97
Commissary sales to United States Government vessels:			
Ice	$218.70	$215.70	$434.40
Wholesale groceries	219.98	3,642.08	3,862.06
Cold storage	3,335.89	13,376.22	16,712.11
Laundry	473.91	.....	473.91
Miscellaneous	394.92	369.58	764.50
Total	4,643.40	17,603.58	22,246.98
Total commissary sales to all vessels:			
April, 1921	$51,218.09	$31,187.64	$82,405.73
March, 1921	58,474.24	45,476.62	103,950.86
April, 1920	84,651.14	36,512.64	121,163.78
Admeasurement certificates:			
United States equivalent issued or made	37	4	41
Measured for Panama Canal	19	7	26
United States equivalent or Panama Canal corrected	28	10	38
Services of harbor equipment:			
Tugs, total operating hours	572	343	915
Launches, total operating hours	1,700	1,242	2,942
Vessels repaired at Panama Canal shops:			
Commercial—			
Steamships	35	13	48
Schooners	2	.....	2
Battleship (Spanish)	.....	1	1
Motorship	1	.....	1
Total	38	14	52
United States Government—			
Steamers	3	5	8
Submarines	.....	4	4
Subchasers	.....	2	2
Army transport	1	.....	1
Tugs	3	1	4
Dredge	1	.....	1
Mine planter	1	.....	1
Launches	7	1	8
Total	16	13	29
Total vessels repaired at Canal shops	54	27	81
Services to American vessels:			
Crews shipped	2	.....	2
Crews paid off	2	.....	2
Shipping articles written	2	.....	2
Marine note of protest noted	23	1	24
Marine notes of protest extended	1	.....	1
Services to American seamen:			
Seamen shipped	154	98	252
Seamen paid off	123	60	183
Seaman deceased	.....	1	1
Seamen deserted	8	1	9
Seamen lodged and subsisted	13	37	50
Seamen repatriated	11	23	34

	Cristobal.	Balboa.	Total.
Wages of American seamen:			
Total amount of wages earned	$36,049.35	$3,634.72	$39,684.07
Deductions approved by Deputy Shipping Commissioner	14,277.43	722.86	15,000.29
Balance due seamen	21,771.92	2,911.86	24,683.78
Paid to seamen	17,529.57	2,376.37	19,905.94
Received on deposit for seamen	4,242.35	535.49	4,777.84
Clearances issued	145	126	271
Bills of health issued	153	126	279
Movement of passengers.			
Disembarking at Canal ports:			
First class—			
From Atlantic ports	889	1	890
From Pacific ports	269	184	453
Total, first class	1,158	185	1,343
Other than first class—			
From Atlantic ports	801	1	802
From Pacific ports	75	54	129
Total, other than first class	876	55	931
Total disembarking at Canal ports	2,034	240	2,274
Embarking from Canal ports:			
First class—			
For Atlantic ports	1,628	1	1,629
For Pacific ports	142	153	295
Total, first class	1,770	154	1,924
Other than first class—			
For Atlantic ports	864	.....	864
For Pacific ports	66	79	145
Total, other than first class	930	79	1,009
Total embarking from Canal ports	2,700	233	2,933
Remaining on board vessels:			
First class—			
Bound from Atlantic to Pacific ports	326	362	688
Bound from Pacific to Atlantic ports	671	920	1,591
Bound from Atlantic to Atlantic ports	603	.....	603
Total, first class	1,600	1,282	2,882
Other than first class—			
Bound from Atlantic to Pacific ports	357	429	886
Bound from Pacific to Atlantic ports	556	604	1,160
Bound from Atlantic to Atlantic ports	91	.....	91
Total, other than first class	1,004	1,033	2,037
Total remaining on board	2,604	2,315	4,919
Total passengers arriving	4,638	2,555	7,193
Total passengers departing	5,304	2,548	7,852
Arrivals in excess of departures	.....	7	.....
Departures in excess of arrivals	666	.....	.....
Net excess of departures	.....	.....	659

LOCK OPERATION.

The following tabulations give the number of lockages, vessels through the locks, and the consumption of water for lockages, for the month of April, 1921, in comparison with that of the preceding month, and of the corresponding month of last year.

NUMBER OF LOCKAGES.

	Commercial.			Noncommercial.			Grand total.
	North.	South.	Total.	North.	South.	Total.	
Gatun	107	111	218	6	5	11	229
Pedro Miguel	109	120	229	19	23	42	271
Miraflores	109	120	229	14	17	31	260
Total lockages, April, 1921	325	351	676	39	45	84	760
Total lockages, March, 1921	332	418	750	45	50	95	845
Total lockages, April, 1920	305	307	612	.....	.....	77	689

NUMBER OF VESSELS PUT THROUGH LOCKS.

	Commercial.			Noncommercial.			Grand total.
	North.	South.	Total.	North.	South.	Total.	
Gatun	115	127	242	21	20	41	283
Pedro Miguel	112	123	235	52	49	101	336
Miraflores	112	123	235	37	40	77	312
Total vessels, April, 1921	339	373	712	110	109	219	931
Total vessels, March, 1921	354	449	803	109	111	220	1,023
Total vessels, April, 1920	337	346	683	.....	.....	183	866

Noncommercial vessels through the locks were classified as follows:

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy equipment	25	26	28
Canal equipment	16	75	49
Total noncommercial vessels	41	101	77

The consumption of water for lockages, loss in leakage, and for maintenance, is shown in the following tabulation:

	Gatun.	Pedro Miguel.	Miraflores.
	Cubic feet.	*Cubic feet.*	*Cubic feet.*
Lockages	886,560,000	789,570,000	772,270,000
Leakage	25,000,000	11,800,000	59,000,000
Maintenance	.....	36,550,000	1,580,000
Total consumption, April, 1921	911,560,000	837,920,000	822,850,000
Total consumption, March, 1921	990,900,000	919,450,000	908,450,000
Total consumption, April, 1920	783,780,000	795,050,000	765,720,000

METEOROLOGY AND HYDROGRAPHY.

The rainfall for the month was generally below normal everywhere except at Monte Lirio, Gatun, Brazos Brook, and Colon; the heavy rainfall over the Atlantic Coast on the 21st being responsible for the excess in that section. Totals in the Canal Zone and vicinity ranged from 0.42 inch at Culebra to 7.43 inches at Colon. The greatest amount of precipitation recorded on any one day was 4.93 inches at Monte Lirio on April 21.

The estimated rainfall over the Gatun Lake watershed area was 3.25 inches, as compared with a 11-year mean of 4.62 inches; over the Chagres River watershed area above Alhajuela, it was 3.65 inches, as compared with a 20-year mean of 4.55 inches.

The discharge of the Chagres River at Alhajuela was 540 c. f. s., being 49 per cent below the 20-year April mean of 1,052 c. f. s., and furnished 49 per cent of the Gatun Lake total yield. The maximum momentary discharge was 1,300 c. f. s. at elevation 91.50 feet on the 22d and 23d, and the minimum flow was 364 c. f. s. on several dates. There were no rises of any consequence during the month.

The Gatun Lake watershed total yield was 1,105 c. f. s., being 46 per cent below the 11-year April mean of 2,031 c. f. s. The maximum total yield recorded for the month of April was 6,263 c. f. s. in 1915, while the minimum total yield was 328 c. f. s. in 1920. The net yield for the month was 244 c. f. s. The lake varied in elevation from 83.78 feet on the 1st to 82.57 feet on the 30th. A decrease in storage of 5.45 billion cubic feet occurred during the month, which is the maximum storage depletion for the month of April since the existence of Gatun Lake.

The draft on the lake for lockages and power was 2,282 c. f. s. as compared with 2,394 c. f. s. for last month and 1,244 c. f. s. for April, 1920. The ratio of water used for power and lockages was 2.53 to 1. The consumption of 1,636 c. f. s. at the hydroelectric plant is the highest on record for the month of April. There were no spillway operations during the month.

Gamboa pumping plant and the Brazos Brook reservoir drew 42 and 43.3 million cubic feet, respectively, from the lake, and 37,000,000 cubic feet were transferred through Pedro Miguel Locks for the maintenance of Miraflores Lake surface elevation.

Miraflores Lake varied from a maximum elevation of 53.60 feet on the 6th to a minimum elevation of 52.67 feet on the 19th, averaged 53.19 feet, and ended at 53.51 feet midnight the 30th.

There were no seismic disturbances recorded during the month.

Temperature records for the month of April are given below:

Station.	Maximum.	Minimum.	Monthly mean.
Balboa Heights	93	70	81.1
Gamboa	92	71	81.4
Alhajuela	92	64	80.1
Gatun	89	72	80.4
Colon	88	74	81.8

ELECTRICAL DIVISION.

The combined gross output of the Gatun hydroelectric station for the month of April was 5,660,900 KWH, on a computed water consumption of 4,239,320,000 cubic feet. The combined gross output of the Miraflores steam plant was 39,290 KWH, with an oil consumption of 2,135 barrels.

The total gross output of both stations was 5,700,190 KWH, and the total power distributed to consumers was 4,776,562 KWH. The total loss of power in plant auxiliaries, transmission and transformation was 923,628 KWH, or 16.2 per cent of the gross output.

Miscellaneous repairs and installations of electrical equipment were made on 52 vessels, 24 at Cristobal and 28 at Balboa. There were 465 work orders issued for work to be performed by the Electrical Division during the month of April, as compared with 414 during March.

The following work was under progress during the month, with completion on April 30 as shown:

	Per cent completed.
Installation of two 1,000-ampere, K-12 switches at Cristobal substation	97
Installation of new 8,400 KVA transformer and new tie-line equipment in Gatun substation	70
Installation of 2 complete feeder equipments at the Balboa substation	[1]95
Extension of underground distribution in New Cristobal	[1]99
Installation of two 5 KW, 2,300-2,080-volt, 230-115-volt, single-phase transformers in feeder No. 7, Miraflores substation	100
Removal of transmission line wires over Gamboa Bridge	100

[1] Indicates that no work was performed during the month.

SHOP, FOUNDRY, AND DRY DOCK WORK.

The decline in both marine and general work at the Mechanical Division shops continued during April. Not only has there been an unprecedented slackness in marine work, but the general work of the shops has fallen off considerably, thereby doubly entailing reductions in force. The restriction in service by the Panama Railroad and the necessary economies have resulted in the car shop force being cut approximately in half.

Operations out in the woods by the native lumber industry have been discontinued. The sawmill has been placed in intermittent operation instead of daily operation; night shifts have been taken off except for special jobs.

Miscellaneous repairs were made at the Balboa shops on 27 vessels during the month, the more important of which were as follows:

The Spanish battleship *España*, which had been on the rocks off the coast of Chile and considerably damaged, was placed in dry dock on April 26 for repairs to bottom. Temporary repairs had been made in Chile, but permanent repairs, which will take about 7 weeks, are being carried on at the dry dock.

The steamship *Tregantle* was placed in dry dock for rebuilding the bow. This vessel had collided head on with a perpendicular rock in the vicinity of Callao. Her bow was driven back and bellowsed to the collision bulkhead forward of No. 1 hold. It had to be entirely renewed. A new bow was built, and by working day and night, the vessel was undocked in 17 days.

The U. S. S. *Tacoma* having lost her port propeller, was placed in dry dock for examination of the broken shaft to determine the probable cause of the injury, and examination of the starboard shaft to determine its serviceability.

The steamship *Kiyo Maru* was placed in dry dock, and work done to enable her to meet the necessary requirements to be again put in service as an oil tanker, she having been used for general cargo for several years previously.

Repairs to the United States destroyer *Satterlee* were completed. The steering engine shipped from the United States was installed and the vessel left to rejoin the fleet.

At the Cristobal shops, miscellaneous repairs were made on 54 vessels, the more important of which were as follows:

The tanker *Doewa* was dry-docked. The accommodations for the crew were altered; steel, water-tight doors were manufactured, fitted, and installed, and the gravity tank valves repaired.

The tanker *Anam* was dry-docked and the bottom cleaned and painted; the pistons and rings of the main engines were cleaned and renewed as necessary, and the main bearings trued up.

The steamship *Manavi* was dry-docked, cleaned, and painted; a new funnel manufactured and installed, and the steam end of the Weir's pump rebored.

The propeller shaft of the tug *Atlas* was repaired and 2 new fuel pumps installed.

Vessels were dry-docked during the month as follows: At Cristobal, steamships *Acajutla* and *Manavi*; tankers *Doewa* and *Anam*; barges *Nos. 103* and *104*, and tug *Atlas*. At Balboa, battleship *España*, steamships *Circassion Prince*, *Peru*, *Kiyo Maru*, and *Tregantle*; U. S. subchasers *Nos. 285* and *355*; submarines *O–12*, *O–13*, and *O–15*; tugs *Gorgona* and *Miraflores*; crane *Hercules*; and barge *No. 137*.

The output of the Mechanical Division in patterns, castings, and foundry production for April, as compared with the preceding month, was as follows:

	April, 1921.			March, 1921.		
	Patterns.	Castings.	Pounds.	Patterns.	Castings.	Pounds.
Iron	7	2,910	37,314	26	595	47,676
Steel	1	758	77,121	17	508	101,882
Brass	15	1,033	17,298	24	1,112	16,400

The routine inspection, hostling, and repair of equipment for the Panama Railroad Company was carried on during the month. Six hundred and ninety-four job orders were completed during the month, with 352 remaining uncompleted on April 30.

BUILDING DIVISION.

The following statement represents the degree of completion on April 30, 1921, of the more important work under construction by the Building Division:

	Per cent completed.
Silver townsite, Mount Hope:	
Forty 12-family married quarters	100
Ten 32-room bachelor quarters	100
Royal Mail Steam Packet Company's office, Cristobal	93
Reroofing Cristobal bakery	100
Repairs to 35 houses, Cristobal	85
Four hundred sixty-eight kitchenettes, for silver townsite, Cristobal	60
Roof between buildings 2 and 3, Balboa	98
Roof between buildings 3 and 4, Balboa	100
Moving 2 type-18 houses from Las Cascadas to Cristobal	100
All-America Cable Company's office, Cristobal	73
Manufacture of 300 wooden rocking chairs	40
Erection of boiler, cold storage plant, Cristobal	35
Rebuilding ovens, Cristobal bakery	85
Construction of building for Salvation Army, Colon	100
Manufacture of 48 revolving chairs	30
Repairs to roof, Hotel Washington	20

Construction work for the Army and Navy is separately reported.

DREDGING DIVISION.

Cucaracha slide showed no movement during the month of April. The dredge *Paraiso*, working half of the month in this vicinity, removed 60,200 cubic yards of material, making a total of 2,547,700 cubic yards removed from this area since the slide of February, 1920. There was no interference with Canal traffic during the month. Neither Culebra nor Barge Repair slides showed any movement during April.

The total excavation in April, including earth, rock, run-of-bank gravel, and sand, was 426,410 cubic yards, as follows:

Cubic yards.	Classified as— Earth.	Rock.	Character of work.	Stations.	Equipment.
				Gaillard Cut (Cucaracha).	
60,200	12,000	48,200	Maintenance	1804–00 to 1814–00 E.	*Paraiso.*
				Gaillard Cut (West Culebra).	
4,500	600	3,900	Maintenance	1796–50 to 1794–00 W.	*Paraiso.*
				Gaillard Cut (East Culebra).	
7,900	1,600	6,300	Maintenance	1781–00 to 1804–00 E.	*Paraiso.*
				Gaillard Cut (Pontoon Bridge).	
9,900	.....	9,900	Construction	1885–00 to 1893–00 E. and W.	*Paraiso.*
1,600	1,600	.....	Maintenance	1885–00 to 1893–00 E. and W.	*Paraiso.*
				Miraflores Lake.	
91,900	91,900	.....	Maintenance	2019–00 to 2032–00 E. and W.	*No. 83.*
				Pacific entrance.	
30,000	30,000	.....	Maintenance	2210–00 to 2191–00 W.	*Cascadas.*
			Maintenance	2280–00 to 2283–00 E.	
4,700	.....	4,700	Construction	2210–00 to 2191–00 W.	*Cascadas.*
			Construction	2280–00 to 2283–00 E.	
20,000	20,000	.....	Maintenance	2210–50 to 2214–50 W.	*No. 84.*
			Maintenance	2283–50 to 2285–80 W.	
				Atlantic terminals.	
116,400	116,400	.....	Aux. construction	Inner harbor, Cristobal	*No. 86.*
68,500	68,500	.....	Aux. construction	Area No. 1, Cristobal	*No. 86.*
				Balboa inner harbor.	
8,000	7,000	1,000	Construction	Front of dock No. 14	*Cascadas.*
1,000	1,000	.....	Maintenance	Front of dock No. 14	*Cascadas.*
				Chagres River.	
1,810	1,810	.....	Aux. construction	Gravel service	*Marmot.*
426,410	352,410	74,000			

The material excavated at the various stations was disposed of as follows:

	Cubic yards.
Fill, west of Cristobal coaling station	184,900
Miraflores Lake	91,900
North of Gamboa	82,400
Dumped at sea, Pacific entrance	43,700
San Juan fill	11,000
Flats, west of Canal, Pacific entrance	9,000
Towed to Gamboa	1,810
North of Gold Hill	1,400
Canal prism, south of Cucaracha	300
Total	426,410

On May 1, 1921, the following construction excavation remained to be done:

Location.	Earth.	Rock.	Total.
	Cu. yds.	*Cu. yds.*	*Cu. yds.*
Gaillard Cut	.....	15,100	15,100
Pacific entrance	45,000	70,700	115,700
Total, Canal prism	45,000	85,800	130,800
Balboa inner harbor	17,850	5,000	22,850
Total, ocean to ocean	62,850	90,800	153,650

MUNICIPAL ENGINEERING DIVISION.

The total output of all pumping stations, and of the 3 filtration plants as compared with the preceding month, and of the corresponding month of last year, were as follows:

	April, 1921.	March, 1921.	April, 1920.
	Gallons.	*Gallons.*	*Gallons.*
Pumping stations	783,872,250	834,072,750	845,325,250
Filtration plants	479,176,000	511,274,000	532,439,000

The consumption of water in Panama City was 97,213,000 gallons, and the amount consumed in Colon 60,558,750 gallons. Sales of water to 90 vessels at Balboa and 172 vessels at Cristobal, totaled 2,714,250 and 8,268,960 gallons, respectively.

Construction work, as itemized below, was under progress during the month, with completion on April 30 as shown:

	Per cent completed.
Municipal work, New Cristobal townsite:	
Grading	[1] 53
Roads	[1] 97.5
Water lines	[1] 72
Sidewalks	[1] 86
Installation of two 12-inch oil lines to Pier 6, Cristobal	45
Installation of 6-inch Diesel oil line to dock 6, Cristobal	100
Concreting streets, new Santo Tomas Hospital	100
Reconstruction of road, Quarry Heights	[1] 95
New wash-water tank, Miraflores	[1] 95
Construction of new concrete sea wall, Santo Tomas Hospital	21
Construction of sewer and water lines, Southern Avenue, Panama	[1] 50
Construction of concrete trestle under oil line, Balboa	100
Extension of roads, new Santo Tomas Hospital	5

[1] Indicates that no work was performed during the month.

OCCUPANTS OF QUARTERS.

Occupants of Panama Canal and Panama Railroad quarters on April 30, 1921, were classified as follows:

	Men.	Women.	Children.	Totals.		
				April, 1921.	March, 1921.	April, 1920.
Americans	3,191	2,221	2,621	8,033	8,290	8,558
Europeans	160	25	75	260	245	238
West Indians	4,997	2,315	4,702	11,814	11,666	9,601
Totals, April, 1921	8,148	4,561	7,398	20,107	.....	.....
Totals, March, 1921	8,452	4,581	7,168	.....	20,201	.....
Totals, April, 1920	8,805	3,912	5,680	.....	.....	18,397

WORKING FORCE.

(Effective April 20, 1921.)

Department or division.	Employees.		Total employees.		
	Gold.	Silver.	April, 1921.	March, 1921.	April, 1920.
Operation and Maintenance:					
Office	29	51	80	73	81
Building Division	107	315	422	514	2,110
Electrical	187	230	417	478	586
Municipal Engineering	98	787	885	886	1,607
Lock Operation	194	717	911	893	629
Dredging	185	753	938	1,271	1,235
Mechanical	705	1,263	1,968	2,253	3,068
Marine	201	483	684	780	595
Fortifications	65	261	326	318	288
Totals	1,771	4,860	6,631	7,466	10,199
Supply Department:					
Quartermaster	214	1,459	1,673	1,700	2,121
Subsistence	32	381	415	444	453
Commissary	282	1,373	1,655	1,752	1,934
Cattle Industry—Plantations	21	276	297	428	1,025
Hotel Washington	10	95	105	111	116
Totals	559	3,584	4,143	4,435	5,649
Accounting	231	9	240	252	270
Health	243	862	1,105	1,171	1,153
Executive	569	257	826	828	803
Totals	1,043	1,128	2,171	2,251	2,226
Panama Railroad:					
Superintendent	64	435	499	558	629
Transportation	106	144	250	254	332
Receiving and Forwarding Agency	71	900	971	698	2,279
Coaling stations	117	1,288	1,405	1,020	1,397
Totals	358	2,767	3,125	2,530	4,637
Grand totals	3,731	12,339	16,070	.....	.....
Grand totals, March, 1921	3,991	12,691	.....	16,682	.....
Grand totals, April, 1920	4,683	18,028	.....	.....	22,711

DIVISION OF SCHOOLS.

The following statement shows the net enrollment, attendance, cases of tardiness, etc., in the Canal Zone schools for the month of April:

	White schools.	Colored schools.
Net enrollment	2,073	1,437
Average number belonging to school	1,780	1,183
Average daily attendance	1,701	1,061
Per cent of attendance to average number belonging	95.6	88.8
Number of pupils not absent or tardy	977	368
Number of cases of tardiness	285	.....

VITAL STATISTICS.

A total of 142 deaths occurred during the month of April among the population of the Canal Zone and the cities of Panama and Colon, giving an annual death rate of 14.5 per thousand. Of the total deaths, 10 were due to external causes.

Of the above deaths, 55, or 39 per cent, occurred among children under 5 years of age.

Tuberculosis, acute and chronic nephritis, and diarrhea and enteritis were the leading causes of death.

There were 13 deaths among nonresidents of the Isthmus; these are not included in the above statistics.

Two hundred and ninety-two live births were reported during the month and 16 stillbirths. Including the stillbirths, this is equivalent to an annual birth rate of 31.4 per thousand population. Deaths among children under 1 year of age numbered 35, giving an infant mortality rate, based on the number of births reported for the month of 119.9 per thousand.

One hundred and eighteen cases of malaria were reported during the month; of these 99 cases were contracted outside the Canal Zone. There were 2 cases of typhoid fever reported—1 in Colon and 1 nonresident. Five cases of dysentery were reported—2 in Panama and 2 in the Canal Zone and 1 nonresident.

Thirty-nine cases of smallpox were admitted to the hospital during the month, 22 from Panama, 16 from Colon, and 1 from the Canal Zone. There were no deaths from smallpox.

RECEIPTS AND SALES OF MATERIALS AND SUPPLIES.

The total value of the material ordered on United States requisitions and received on the Isthmus during the month of April was $346,725.16, as compared with $733,374.36 for the preceding month, and $754,085.60 for April, 1920. Of the material received during the month, $317,038.37 was chargeable to operation and maintenance, $6,877.01 to construction and equipment, and $22,809.78 to miscellaneous departments.

The total cash sales on the Isthmus for the month amounted to $39,335.48, of which $35,081.05 was for stock, $840.40 for fuel oil, $368.66 for scrap, and $3,045.37 for obsolete and second-hand material.

Sales to steamships from storehouses amounted to $13,733.44, of which $840.40 was for fuel oil, and $12,893,04 for miscellaneous stock items.

Respectfully,

JAY J. MORROW,

Governor.

Removal of Washington Office, The Panama Canal.

In accordance with instructions issued by the Public Building Commission, which has full control over all Government owned and rented buildings in the District of Columbia, the Washington Office of The Panama Canal has removed from its old quarters at the Mills Building, 1709 G Street, N. W., to quarters assigned in the Old Land Office Building, 7th and E Streets, N. W. Employees going on leave, who contemplate calling at the Washington Office, should bear this in mind.

Correction of Shipping Statistics.

An article appearing in the issue of THE PANAMA CANAL RECORD of April 13, 1921, entitled "Canal Traffic in March," gives in the first paragraph the number of commercial vessels passing through the Canal for that month as 235, and the total cargo carried as 1,184,563 tons. The correct number of vessels was 255, and the cargo carried, 1,084,563 tons. These items are correctly stated in the classified tabulation immediately following the paragraph in question.

Corrections also apply to totals given in an article in the issue of April 6, 1921, under the caption, "New High Records for Net Tonnage and Tolls in March," in which the total of registered net tonnage should be 917,441 instead of 917,432; the total tolls earned for the month $1,105,536.55 instead of $1,105,529.05; and the cargo carried 1,084,563 tons instead of 1,086,463 tons.

Additions to Tariff No. 4—Services to Shipping and Allied Interests.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., May 16, 1921.

The following additions are made to Tariff 4—Schedule of Rates for Supplies and Services Furnished to Shipping and Allied Interests at the Panama Canal:

ITEM 38—COMPRESSED AIR.

Effective June 1, 1921.

The rate for compressed air is based on the size of outlet at the point of delivery as follows:

Size of outlet.	Per hour.
¾"	$0.75
1"	1.25
1½"	2.00
1½"	3.00
2"	5.00

Minimum charge will be for 1 hour. Each succeeding quarter hour or fraction thereof at one-fourth of the above rates.

Charge for making connection will be in addition to time above.

J. J. MORROW,
Governor, The Panama Canal.
President, Panama Railroad Company.

(NOTE—The above additions will be included in Supplement No. 4 to Tariff No. 4 when this supplement is issued.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending May 21, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Point Judith	Pacific Mail Steamship Co		May 15		61
Leon XIII	Spanish Line		May 16		250
Buenos Aires	Johnson Steamship Line	May 15	May 16	70	(1)
Jamaica	Pacific Steam Navigation Co		May 17		75
Ulua	United Fruit Co	May 17	May 18	345	59
Santa Marta	United Fruit Co	May 18	May 19	55	98
Sixaola	United Fruit Co	May 18	May 19	6	9
Cuba	Pacific Mail Steamship Co	May 18	May 19	981	(1)
Cartago	United Fruit Co	May 18	May 20	218	56
Van Rensselaer	Royal Netherlands W. I. Mail	May 18	May 20	22	1,504
Amazon Maru	Osaka Shosen Kaisha	May 19	May 19	110	(1)
Caribbean	Panama Railroad Cattle Industry	May 20		400	
Columbia	N. O. & S. A. S. S. Co	May 20	May 21	90	75
Barima	Pacific Steam Navigation Co		May 21		182½
Ulysses	Royal Netherlands W. I. Mail	May 21		216	
San Bruno	United Fruit Co	May 21	May 21	30	½

[1] No cargo laded.

Distribution of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, April, 1921.[1]

From—	North America. United States. North Atlantic ports.	North America. United States. South Atlantic ports.	North America. United States. Gulf ports.	North America. United States. Total, United States.	North America. West Indies.	North America. Cristobal, C. Z.	North America. East coast, Mexico.	North America. Total, North America.	Europe. Belgium.	Europe. British Isles.	Europe. Denmark.	Europe. France.	Europe. Germany.	Europe. Holland.	Europe. Italy.	Europe. Spain.	Europe. Europe.[2]	Europe. Total, Europe.	Grand total.	Per cent of total cargo.
South America.																				
Chile	36,199	46,504	.....	82,703	....	206	....	82,909	.....	4,301	.....	26,399	199	17,058	700	...	11,106	59,763	142,672	35.4
Colombia	2,527	.....	.....	2,527	....	392	....	2,919	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	2,919	0.7
Ecuador	3,066	.....	.....	3,066	....	1,194	....	4,260	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	4,260	0.9
Peru	282	.....	.....	282	....	3,702	....	3,984	.....	647	.....	.....	.....	.....	.....	...	.....	647	4,631	1.0
[1] West coast of South America	2,115	.....	.....	2,115	....	281	....	2,396	.....	.....	.....	.....	.....	.....	30	70	.....	100	2,496	0.5
Total, South America	44,189	46,504	.....	90,693	....	5,775	....	96,468	.....	4,948	.....	26,399	199	17,058	730	70	11,106	60,510	156,978	38.5
North America:																				
West coast, United States	58,371	527	.....	58,898	589	146	955	60,588	1,005	45,875	336	.....	11,862	1,000	12,131	...	654	72,863	133,451	33.1
West coast, Canada	836	.....	.....	836	....	.....	....	836	.....	6,866	.....	160	.....	.....	.....	...	.....	7,026	7,862	2.0
West coast, Central America	380	.....	.....	380	....	2,788	....	3,168	.....	1,390	.....	.....	58	.....	.....	...	329	1,777	4,945	1.1
Hawaii	5,667	.....	.....	5,667	....	.....	....	5,667	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	5,667	1.3
Total, North America	65,254	527	.....	65,781	589	2,934	955	70,259	1,005	54,131	336	160	11,920	1,000	12,131	...	983	81,666	151,925	37.5
Asia:																				
China	1,536	1,393	.....	2,929	....	.....	....	2,929	.....	4,890	34	.....	.....	.....	.....	...	.....	4,924	7,853	2.0
Japan	88	.....	.....	88	....	.....	....	88	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	88	.....
Malay Peninsula	634	.....	.....	634	....	.....	....	634	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	634	.....
Philippine Islands	2,427	.....	.....	2,427	....	.....	....	2,427	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	2,427	0.6
[1] Far East	3,400	.....	1,643	5,043	....	.....	....	5,043	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	5,043	1.2
Total, Asia	8,085	1,393	1,643	11,121	....	.....	....	11,121	.....	4,890	34	.....	.....	.....	.....	...	.....	4,924	16,045	3.8
Australasia:																				
Australia	300	.....	.....	300	....	.....	....	300	.....	12,518	2,465	.....	.....	.....	.....	...	.....	14,983	15,283	3.8
New Zealand	.....	.....	.....	.....	....	.....	....	.....	.....	50,679	.....	.....	.....	.....	.....	...	3,119	53,798	53,798	13.2
[1] Australasia	5,120	.....	.....	5,120	....	.....	....	5,120	.....	911	.....	.....	.....	.....	.....	...	6,752	7,663	12,783	3.2
Total, Australasia	5,420	.....	.....	5,420	....	.....	....	5,420	.....	64,108	2,465	.....	.....	.....	.....	...	9,871	76,444	81,864	20.2
Grand totals	122,948	48,424	1,643	173,015	589	8,709	955	183,268	1,005	128,077	2,835	26,559	12,119	18,058	12,861	70	21,960	223,544	406,812	100.0
Per cent of total cargo	30.6	12.1	0.4	43.1	....	2.2	0.2	45.5	0.2	31.3	0.6	6.7	3.0	4.5	3.1	...	5.1	54.5	100.0	.....
Per cent of total cargo, March, 1921	25.9	6.2	2.1	34.2	1.2	2.5	....	38.1	5.4	30.4	0.2	1.6	8.2	5.7	0.2	0.3	3.7	55.8	.....	.....

[1] Figures represent tons of 2,240 pounds.

[2] General cargo not routed so as to allow segregation among various ports.

Distribution of Cargo passing through the Panama Canal from the Atlantic to the Pacific, April, 1921.[1]

From—	South America.						North America.						Asia.						Australasia.					
	Chile.	Colombia.	Ecuador.	Peru.	West coast, South America.[2]	Total, South America.	West coast, United States.	West coast, Canada.	Central America.	Pacific terminus, Panama Canal.	West coast, North America.[2]	Total, North America.	China.	Japan.	Malay Peninsula.	Philippine Islands.	Far East.[2]	Total, Asia.	Australia.	New Zealand.	Australasia.[2]	Total, Australasia.	Grand totals.	Per cent of total cargo.
North America:																								
North Atlantic ports	5,895	864	465	5,403	14,142	26,769	63,084	668	.....	.....	4,069	67,821	2,831	19,265	.....	11,862	15,783	49,741	12,951	12,443	26,855	52,249	196,580	39.24
South Atlantic ports	9,266	.....	.....	.....	.....	9,266	1,178	.....	.....	.....	.....	1,178	1,023	6,179	.....	8,535	1,000	16,737	1,543	.....	.....	1,543	28,724	5.6
Gulf ports	9,543	.....	72	299	.....	9,914	30,575	.....	.....	10,000	.....	40,575	7,564	.....	.....	270	6,942	14,776	10,960	503	966	12,429	77,694	15.5
Total, U. S.	24,704	864	537	5,702	14,142	45,949	94,837	668	.....	10,000	4,069	109,574	11,418	25,444	.....	20,667	23,725	81,254	25,454	12,946	27,821	66,221	302,998	60.34
West Indies	.....	.....	.....	.....	.....	.....	.....	5,286	.....	.....	.....	5,286	.....	14,145	.....	.....	.....	14,145	5,780	.....	.....	5,780	25,211	5.4
Panama Canal, Atlantic terminus	.....	343	453	1,138	1,974	3,908	428	.....	1,853	.....	450	2,731	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,639	1.32
East coast, Canada	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,150	9,150	9,150	1.8
East coast, Mexico	37,568	.....	.....	8,800	.....	46,368	20,500	.....	.....	.....	.....	20,500	.....	.....	16,117	.....	.....	16,117	.....	.....	.....	.....	82,985	16.6
Total N. America	62,272	1,207	990	15,640	16,116	96,225	115,765	5,954	1,853	10,000	4,519	138,091	11,418	39,589	16,117	20,667	23,725	111,516	31,234	12,946	36,971	81,151	426,983	85.3
Europe:																								
Belgium	3,000	.....	.....	.....	530	3,530	7,145	.....	.....	.....	1,118	8,263	.....	.....	.....	.....	.....	.....	.....	3,960	.....	3,960	15,753	3.15
British Isles	5,354	.....	192	1,480	4,332	11,358	157	289	.....	.....	386	832	.....	.....	.....	.....	.....	.....	.....	27,832	.....	27,832	40,022	8.0
Holland	389	.....	.....	12	492	893	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	893	0.22
Germany	1,060	.....	.....	291	1,609	2,960	690	.....	.....	.....	.....	690	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,650	0.73
France	.....	.....	.....	.....	275	275	68	.....	9	.....	50	127	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	402	0.1
[2] Europe	3,333	.....	.....	1,460	1,135	5,928	499	.....	.....	.....	.....	499	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,427	1.2
Total, Europe	13,136	.....	192	3,243	8,373	24,944	8,559	289	9	.....	1,554	10,411	.....	.....	.....	.....	.....	.....	.....	31,792	.....	31,792	67,147	13.4
East coast, S. America	.....	531	.....	.....	108	639	5,891	141	.....	.....	.....	6,032	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,671	1.3
Grand totals	75,408	1,738	1,182	18,883	24,597	121,808	130,215	6,384	1,862	10,000	6,073	154,534	11,418	39,589	16,117	20,667	23,725	111,516	31,234	44,738	36,971	112,943	500,801	100.0
Per cent of total cargo, April, 1921	15.6	0.3	0.2	3.6	4.7	24.4	26.0	1.4	0.4	2.0	1.2	31.0	2.3	7.9	3.2	4.1	4.7	22.2	6.2	8.9	7.3	22.4	100.0	.....
Per cent of total cargo, March, 1921	16.4	0.1	0.6	1.5	4.8	23.4	18.0	4.4	0.4	6.3	1.5	30.6	5.9	9.4	.....	1.3	6.7	23.3	5.8	11.4	5.5	22.7	.....	.....

[1] Figures represent tons of 2,240 pounds.

[2] General cargo not routed so as to allow segregation among various ports.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight May 21, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Ucayali	7	23.00	15	6.15	15	13.28	15	15.25	Peruvian	Peruvian Steamship Line	374.0	46.0	18.6	Cristobal	Callao	General	459	4,466	2,405
Point Judith	14	15.17	15	6.15	15	14.17	15	15.25	American	Pacific Mail Steamship Co	289.0	41.0	20.6	Baltimore	San Francisco	General	3,113	2,895	1,982
Dunsyre [1]	14	17.40	15	6.40	15	16.25	15	20.00	American	Robert Dollar Co	277.0	41.0	17.6	Philadelphia	San Francisco	General	2,026	2,217	2,008
Washington Maru	14	8.10	15	7.44	15	15.58	15	17.12	Japanese	Kokusai Kisen Kaisha	385.0	51.0	26.9	Port Arthur	Darien	Case oil	5,961	5,919	4,400
Buenos Aires [2]	15	13.55	16	6.16	16	13.57	16	19.08	Swedish	Johnson Steamship Line	440.0	56.0	16.0	Stockholm	San Francisco	General	1,047	7,591	5,661
Haleric	16	6.40	16	13.03	16	20.22	16	21.30	British	Andrew Weir & Co	400.0	52.0	25.3	New York	Manila	General	7,000	6,131	4,632
Sciota [3]	9	17.31	16	7.00	16	13.50	17	23.41	American	United States Navy	149.4	30.0	.....	Cristobal	Guayaquil	.....	.....	.....	.....
O-11, O-12, O-13, O-15, -O 16 [4]	.....	.....	16	8.15	16	15.59	17	23.16	American	United States Navy	184.0	18.0	.....	Cristobal	Guayaquil	.....	.....	.....	.....
Chile	6	16.00	18	6.05	18	13.46	18	15.09	British	Pacific Steam Navigation Co	350.0	43.1	17.8	Cristobal	Valparaiso	General	288	4,065	2,668
Santa Teresa	17	19.15	18	6.15	18	13.07	18	14.20	American	W. R. Grace & Co	360.2	51.6	24.7	New York	Talcahuano	General	3,954	5,726	4,086
Liebre	18	6.00	18	7.03	18	15.08	18	16.15	American	General Petroleum Co	435.0	56.0	27.6	Tampico	Iquique	Crude oil	10,400	7,567	5,160
Eastern Crown	15	8.35	18	12.52	18	20.50	18	22.00	American	U. S. & Australian Line (S. B.)	399.7	54.7	23.0	New York	Adelaide	General	5,942	6,167	4,444
Oak Branch	17	14.00	19	6.12	19	13.26	19	14.45	British	Nautilus Steamship Co	385.0	49.8	16.6	Liverpool	Coronel	General	3,144	5,209	4,031
Iowan	19	6.39	19	7.10	19	15.10	19	16.35	American	American-Hawaiian Line	407.0	53.7	23.0	New York	Los Angeles	General	4,000	7,091	5,054
Kiyo Maru	19	6.53	19	7.34	19	17.49	19	19.13	Japanese	Toyo Kisen Kaisha	470.0	56.5	28.0	Tampico	Yokohama	Crude oil	7,879	9,146	6,385
Peshawur	19	7.31	19	9.15	19	18.21	19	22.50	British	P. & O. Steam Navigation Co	449.0	58.0	24.6	Norfolk	Wellington	Coal	2,696	8,175	5,342
South American	19	18.30	20	6.12	20	13.09	20	14.55	British	South American Steamship Co	251.0	43.6	20.9	New York	Callao	General, coke	2,772	2,444	1,593
Indianie	20	19.04	21	6.33	21	14.00	21	15.05	Swedish	Rederiaktieb Transatlantic	380.4	52.0	24.9	Galveston	Adelaide	Sulphur	5,500	5,450	3,900
Barima	13	17.00	21	10.52	21	17.00	21	18.10	British	Pacific Steam Navigation Co	220.0	37.0	11.0	Cristobal	Champerico	General	158	1,650	918

[1] Bark. [2] Motor ship. [3] Tug. [4] Submarines.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Annapolis [5]	14	12.49	15	6.45	15	14.10	15	15.08	American	United States Navy	168.0	36.0	13.7	Balboa	Key West	.....	.....	.....	.....
Corinthic	15	5.19	15	8.07	15	15.35	16	6.23	British	White Star Line	500.3	63.3	26.0	Bluff, N. Z.	London	General	4,576	12,820	9,507
Solana	15	8.20	15	10.11	15	17.08	15	20.50	American	Pacific Mail Steamship Co	419.5	56.5	17.6	Iquique	Tampico	Ballast	.....	7,043	5,050
Gen. Wm. M. Graham [6]	4-30	15.00	15	8.17	15	14.10	.....	.....	American	United States Navy	156.0	32.0	.....	Balboa	Cristobal	.....	.....	.....	.....
Falstria	15	2.00	15	12.13	15	20.18	15	20.40	Danish	East Asiatic Co	365.0	50.2	23.0	Valparaiso	Copenhagen	General	4,978	4,799	3,484
Canadian Traveler	15	16.55	16	6.27	16	14.50	16	19.17	British	Canadian Government	400.0	52.0	25.0	Chemainus	Alexandria	(7)	2,803	5,893	4,143

[5] Training ship. [6] Mine planter. [7] Railroad ties.

Sacramento	13	1.00	16	6.40	16	14.10	16	14.10	American	United States Navy	224.0	40.0	.....	Sea	Cristobal	.....	.....	.....	.....
Baranga	16	4.30	16	8.28	16	17.40	16	20.35	British	Shaw, Saville, & Albion Co	478.0	63.2	25.0	Sydney	London	(10)	6,455	11,070	7,931
Apple Branch	16	11.00	16	11.56	16	18.58	16	23.40	British	F. & W. Ritson	376.0	51.7	25.0	Coronel	Liverpool	(11)	5,750	5,112	3,511
Dalia [8]	.....	.....	16	6.00	16	17.20	.....	.....	American	Isthmian Maritime Supply Co	.....	.....	.....	Balboa	Cristobal	.....	.....	.....	.....
Charlton Hall	17	6.30	17	8.27	17	16.45	17	20.00	American	United States Steel Products Co	400.0	50.0	24.6	Taltal	Baltimore	Nitrate	6,576	5,714	4,161
Cape Henry	17	7.50	17	9.16	17	17.15	17	19.15	American	Atl. Gulf & Pacific S. S. Co	376.4	52.3	23.1	San Francisco	Baltimore	Lumber, gen'l [12]	2,957	5,145	3,557
Mexican	17	13.40	17	14.24	7	22.22	17	22.22	American	American-Hawaiian Line	472.3	57.2	31.6	Honolulu	New York	Raw sugar	11,699	9,258	6,911
Meanticut	18	5.50	18	8.10	18	17.15	19	8.09	American	McCormack & McPherson (S.B.)	402.5	53.0	26.8	Portland	Genoa	Wheat	7,659	6,571	4,785
Planter [9]	17	17.20	18	10.27	18	18.35	23	8.27	American	L. A. Scott	158.7	33.5	17.6	Puntarenas	Chester, Pa	Fustic	775	531	456
Cuba	18	7.45	18	12.21	18	19.50	19	19.27	American	Pacific Mail Steamship Co	307.7	42.2	21.0	San Francisco	Habana	Beans, coffee	2,676	3,429	2,206
Ardmore	18	14.10	18	14.45	18	21.55	19	16.37	American	Standard Oil Co	449.5	59.6	19.0	Vancouver	Tampico	Ballast	.....	8,636	6,321
Amazon Maru	18	3.15	19	6.28	19	14.06	19	21.20	Japanese	Osaka Shosen Kaisha	425.0	56.2	19.1	Singapore	New York	Rice, general	4,149	7,901	5,629
Huanchaco	18	21.10	19	17.52	19	15.40	19	18.26	British	Pacific Steam Navigation Co	390.6	50.2	25.0	Talcahuano	Liverpool	General	5,711	5,905	4,391
Eldorado	19	5.00	19	11.21	19	18.35	19	23.40	American	Western Transport Co	245.6	42.0	18.8	Aberdeen	New Orleans	General	2,13[illegible]	2,439	1,662
Stanley Dollar	20	10.15	20	11.09	20	17.53	21	12.09	American	Dollar Steamship Line	288.8	44.6	20.0	San Francisco	New York	General, lumber	3,58[illegible]	3,460	2,404
Satanta	20	14.25	20	15.02	20	21.50	20	23.42	British	Standard Transportation Co	386.0	51.7	20.0	San Francisco	Lobos, Mexico	Ballast	.....	.....	.....
Kennecott	20	14.50	20	15.27	20	22.23	20	20.59	American	Alaska Steamship Co	345.3	49.6	23.0	Aberdeen	New York	Lumber, copper	5,35[illegible]	5,436	3,755
O-12 [8]	20	15.50	21	6.49	21	15.40	.....	.....	American	United States Navy	184.0	13.0	.....	Sea	Cristobal	.....	.....	.....	.....
Lake Fanbush	21	0.15	21	7.51	21	15.53	21	20.55	American	N. O. & S. A. S. S. Co. (S. B.)	251.0	43.6	24.4	Iquique	Savannah	Nitrate of soda	3,710	2,861	1,816
Helikon	21	9.30	21	10.35	21	17.56	21	22.20	Norwegian	Bruusgaard Kiosterud & Co	270.6	49.1	18.6	Taltal	Charleston	Nitrate	2,675	2,304	1,493
Inca	21	10.10	21	11.15	21	18.24	22	14.11	British	Pacific Steam Navigation Co	360.6	43.2	22.2	Coronel	Hull	General	3,735	3,752	2,741
Indien	21	10.30	21	12.37	21	19.35	22	1.42	Danish	Orient Steamship Co	390.7	53.2	27.7	Portland	Rotterdam	General	8,000	.....	.....
West Himrod	21	11.00	21	12 48	21	20.50	22	7.35	American	Admiral Line (S. B.)	410.0	54.4	23.9	Tacoma	Hamburg	Flour	6,800	6,476	4,682
Ortega	21	11.30	21	14.21	21	21.13	22	18.10	British	Pacific Steam Navigation Co	465.3	56.3	21.9	Coronel	Liverpool	General	3,069	8,345	4,998

[8] Launch. [9] Sailer. [10] Cold storage and general. [11] Nitrate, cotton seed, and general. [12] 2,513,855 feet. Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 17	Ulua	United Fruit Co	New York via wayports.	May 16	Leon XIII	Spanish Line	Barcelona via wayports.
May 17	Sacramento	United States Navy	High seas.	May 16	Atenas	United Fruit Co	New Orleans via Bocas del Toro.
May 18	Cartago	United Fruit Co	New Orleans.	May 18	Ulua	United Fruit Co	New York via Port Limon and Habana.
May 18	Van Rensselaer	Royal Netherlands W. I. Mail	Amsterdam via wayports.	May 19	Sixaola	United Fruit Co	New York via Kingston.
May 18	Santa Marta	United Fruit Co	New York via Kingston.	May 19	Santa Marta	United Fruit Co	New York via Colombia and Kingston.
May 18	Linda S. [13]	Surgeon Brothers	Colon.	May 19	Cartago	United Fruit Co	New Orleans via Bocas del Toro and Habana.
May 18	Sixaola	United Fruit Co	Colombian ports.	May 20	Viking	M. Clausen	Cartagena.
May 19	Viking	M. Clausen	Vera Cruz.	May 20	Van Rensselaer	Royal Netherlands W. I. Mail	Puerto Colombia.
May 20	St. Mihiel [14]	United States Army	New York via San Juan.	May 21	San Bruno	United Fruit Co	Boston.
May 20	Columbia	N. O. & S. A. S. S. Line	New Orleans.	May 21	Columbia	N. O. & S. A. S. S. Line	New Orleans and waypts.
May 20	Caribbean	Panama Railroad Cattle Industry	Cartagena.				
May 21	San Bruno	United Fruit Co	Boston via wayports.				
.....	.....	.....	.....				
.....	.....	.....	.....				

[13] Motor schooner. [14] Transport.

PORT OF BALBOA.

May 15	Balboa	Colombian Maritime Co	Tumaco.	May 16	Azov	International Petroleum Co	Talara.
May 20	Silverado	General Steamship Corp. (S. B.)	Valparaiso.	May 17	Balboa	Colombian Maritime Co	Corinto.
May 20	Depere	General Steamship Corp. (S. B.)	Talara.	May 18	Lady Sybil	International Petroleum Co	Talara.
.....	.....	.....	.....	May 20	Depere	General Steamship Corp. (S. B.)	San Francisco.

*Other than ships passing through the Canal.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending May 21, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	*Tons.*
Lady Sybil	International Petroleum Co	May 2	May 18	(1)	45
Azov	International Petroleum Co	May 3	May 16	(1)	1
Balboa	Colombian Maritime Co	May 15	May 16	269	.....
Cuba	Pacific Mail Steamship Co	May 18	May 18	45	.....
Amazon Maru	Osaka Shosen Kaisha	May 18	May 19	150	.....
Silverado	United States Shipping Board	May 20	.....	400	.....
Laura C. Hall	Pacific Metals Transp. Co. Ltd.	May 21	.....	4	.....
Barima	Pacific Steam Navigation Co	May 21	May 21	.....	3

[1] Previously reported.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended May 23:

Steamship *Lady Sybil*, docking, staging, and cleaning; scaling and painting bottom; renewing bilge cover boards in No. 2 hold; renewing approximately 20 feet of fender, port, forward end; annealing steering chains, and performing other miscellaneous deck department repairs; renewing brickwork in boilers where necessary; removing old and installing new donkey boiler; patching and renewing boiler jacket-lagging, and lagging and jacketing new donkey boiler; renewing seats on direct-connected bilge pumps; repairing anchor windlass; Spanish cruiser *España*, docking, cleaning and painting bottom; repairing hull forward where damaged through grounding; miscellaneous minor repairs to hull and engineer's departments, consisting of repairs to drains and vent and sounding pipes in engine rooms; overhauling various pumps; renewing suction and discharge lines to circulators; repairing ash hoist trunk; renewing discharge pipes on ash ejectors; manufacturing evaporator coils; manufacturing one boat boom; repairing and reriveting torpedo net platform, and renewing miscellaneous eye pads and ringbolts on deck; examining rudder; overhauling sea valves and zincs on hull; steamship *Azov*, docking, staging, and cleaning; painting bottom; grinding-in sea valves; repacking cargo tank valves; calking cargo tank and bunker bulkheads where necessary; examining tail shaft; renewing main engine rocker shaft brasses; overhauling air deflectors in furnace fronts; miscellaneous valve work on steam lines and service pumps; and miscellaneous deck work; tug *Miraflores*, docking, cleaning and painting bottom; repairing fenders and rail; miscellaneous minor repairs to machinery; barge *No. 201*, renewing plates, fenders, and deck on one corner where damaged; rebuilding stanchions on roof; launch *Coco Solo*, renewing stem, repairing monkey rails and copper sheathing; launch *Taboga*, renewing exhaust pipe and fittings; renewing stem; recalking hull and renewing copper sheathing as necessary; renewing sections of plank amidships where broken; renewing approximately 50 per cent of garboard strakes, port and starboard; renewing upper and lower fenders, port and starboard; renewing wood decking, beams, and covering board; renewing monkey rail, and performing other hull repairs; supply boat *No. 2*, repairing fenders where damaged; recanvas main deckhouse deck.

The following vessels were at the Cristobal shops for repairs during the week ended May 23:

Steamship *Manavi*, rebore steam end of Weir's pump; dry-dock, clean, and paint; manufacture and install new funnel, etc.; motor ship *Anam*, clean and paint bottom; clean pistons and rings of main engines; examine same and renew as necessary; true-up main bearings, etc.; U. S. S. *Camden*, manufacture rings, pistons, glass lens, bolts, handle, etc.; U. S. submarine *R-1*, repair, retin, and test 3 air-compressor cooler coils; barge *No. 116*, dock and undock; test all compartments, and stop leaks; repair A-frames, sheathing, fenders, etc.; motor schooner *Laura C. Hall*, dock and undock; renew planks on bottom as directed; repair foundation of port engine; replace flywheel key on port engine, etc.; tug *Tavernilla*, bore flywheel, bush same, true-up crank shaft, and secure impeller wheel of circulating engine; install governor and parts, etc.; U. S. S. *Forse*, reseat throttle valves on both main engines; take up lost motion in reversing engine gears on both main engines; repair 3 suction and 3 discharge valves, etc.; U. S. submarine *R-25*, remove anchor gear; increase clutch clearance; install listening apparatus, etc.; schooner *Linda S*, dock and undock; repair keel as directed; steamship *Oak Branch*, dredge *No. 86*, launch *Azimuth*, steamships *Toloa*, *Tamar*, *Urubamba*, *Ulysses*, *Inca*, *West Himrod*, *Van Rensselaer*, schooner *Planter*, steamship *Cartago*, minor repairs.

Canal Zone Highways.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 10, 1921.

To all concerned—The following names are given to the streets and roads in the Canal Zone hereinafter described:

Gaillard Highway—The main road extending from the Ancon railroad crossing to Gamboa, embracing what were formerly referred to as Corozal Road, Miraflores Road, Pedro Miguel Road, Paraiso Road, and Gamboa Road. This name has been selected in acknowledgment of the distinguished services rendered to the Canal by the late Lieut.-Col. D. D. Gaillard, U. S. A., a former member of the Isthmian Canal Commission.

Bolivar Highway—The main road extending from 14th and Bolivar Streets, Cristobal, to the Gatun railroad station, embracing what were formerly referred to as Mount Hope Road, the Mount Hope-Gatun Road, and Gatun Road. This name has been selected as a mark of respect to the memory of the great liberator, Simon Bolivar.

Corozal Road—That portion of the road leading from Corozal toward the Bull Ring in the city of Panama, which lies within the Canal Zone, formerly referred to as the Old Corozal Road.

Miraflores Road—The road which branches out from Gaillard Highway at a point immediately north of junction of road leading to Corozal Hospital, and runs easterly and northerly to its rejunction with Gaillard Highway near the Miraflores railroad station, being part of the old road connecting Corozal and Pedro Miguel.

Spillway Road—The road which branches in a westerly direction from Gaillard Highway at a point almost immediately north of the Miraflores railroad station and leads to the Miraflores substation.

Orange Road—The road which connects the Miraflores filtration plant with Gaillard Highway.

Summit Road—The road which runs through the Summit plantation and connects the plantation with Gaillard Highway.

Plantation Road—The road which branches out from Gaillard Highway at a point north of Summit Road, and runs in an easterly direction to the Las Cascadas Plantation.

Randolph Road—The road which runs from Bolivar Highway to Fort Randolph.

Brazos Road—The road which runs in a southerly direction from the junction of Bolivar Highway and Randolph Road, to the Brazos Brook Reservoir.

JAY J. MORROW,
Governor.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z. (telephone 286):

Aid, Division of History (male and female); $1,500 a year; form 1312; announcement No. 262; age, below 70 years; vacancies exist in the National Museum, Washington, D. C.; June 8, 1921.

Apprentice copperplate map engraver (male and female); $840 a year; form 304; announcement No. 257; age, 16 years but not 18 years; vacancies exist in the Geological Survey, Department of the Interior, Washington, D. C.; June 8, 1921.

Assistant for fishery food laboratory (male and female); $2,000 to $2,400 a year; form 2118; age, below 70 years; vacancies exist in the Bureau of Fisheries, Department of Commerce, Washington, D. C.; June 28, 1921.[1]

Assistant landscape engineer (male and female); $1,800 to $2,400 a year; form 1312; announcement No. 263; age, 25 but not 55 years; vacancies exist in National Park Service, Yosemite, Cal.; June 14, 1921.[1]

Associate development engineer, $2,500 to $3,600 a year; assistant development engineer, $1,800 to $2,500 a year; junior development engineer, $1,440 to $1,800 a year; associate dust explosion prevention engineer, $2,500 to $3,600 a year; assistant dust explosion prevention engineer, $1,800 to $2,500 a year; junior dust explosion prevention engineer, $1,440 to $1,800 a year (male and female); form 2118; age, 20 years but not 45 years; vacancies exist in the Bureau of Chemistry, Department of Agriculture, Washington, D. C.; June 21, 1921.[1]

Associate economist in marketing (male and female); $3,000 to $3,840 a year; form 2118; announcement No. 254; age, below 70 years; vacancies exist in Bureau of Markets, Department of Agriculture; June 21, 1921.[1]

Chemical laboratorian (analytical); $4.80 a day; chemical laboratorian (metallurgical), $5.04 a day (male and female); form 1312; announcement No. 258; age, 18 but not 45 years; vacancies exist at the United States Naval Academy, Annapolis, Md.; June 8, 1921.

Curator, $2,400 a year; assistant curator, $1,800 a year (male and female); form 2118; age, 20 years and over; vacancies exist in the Division of Mineral Technology, National Museum, Washington, D. C.; June 21, 1921.[1]

Dental hygienist (male and female); $720 a year; form 1312; announcement No. 250; age, below 70 years; vacancies exist in Public Health Service throughout United States; August 1, 1921.[1]

Dental laboratory mechanic's helper, $900 to $1,200 a year; dental laboratory mechanic, grade 1, $1,400 to $1,800 a year; grade 2, $2,000 to $2,400 a year (male and female); form 1312; age, 18 years but not 70 years; vacancies exist in the Public Health Service throughout United States; August 1, 1921.[1]

Educational director, $1,800 to $2,400 a year ; teacher, $1,600 to $2,400 a year (male and female); form 2118; announcement No. 570-amended,; age, below 70 years; vacancies exist in Federal Board for Vocational Education for duty at Public Health Service hospitals in the field; July 1, 1921.[1]

Entomological laboratory assistant; $1,080 to $1,440 a year; announcement No. 201-supplemental; postponed from May 11 and 12 to June 8 and 9, 1921.

Laboratory aid in agricultural technology (male and female); $840 a year; form 1312; announcement No. 245; age, below 70 years; vacancies exist in Bureau of Plant Industry, Department of Agriculture, Washington, D. C.; June 8, 1921.

Land law clerk (male and female); $1,000 to $1,200 a year; form 1312; age, 20 but not 45 years; vacancies exist in Department of Interior and Departmental Service, Washington, D. C.; June 22, 1921.

Library aid, $900 to $1,100 a year; library assistant, $1,000 to $1,400 a year; scientific assistant in library science, $1,320 to $1,620 a year (male and female); age, 18 but not 45 years; vacancies exist in the Departmental Service, Washington, D. C.; June 22, 1921.

Lithographic draftsman (male and female); $1,800 a year; form 1312; announcement No. 259; age, 18 but not 70 years; vacancies exist in Hydrographic Office, Navy Department, Washington, D. C.; June 14, 1921.[1]

Mold maker (ceramics) (male and female); $1,500 to $1,680 a year; form 1312; announcement No. 260; age, 21 but not 65 years; vacancies exist in Bureau of Standards, Washington, D. C.; June 14, 1921.[1]

Navigation officer (male and female); $1,800 a year; form 1312; age, 30 years but not 45 years; vacancies in Bureau of Navigation, Department of Commerce; June 22, 1921.

Opener and packer (male and female); $840 a year; form 304; announcement No. 253; age, 18 but not 70 years; vacancies in Bureau of Standards, Department of Commerce, Washington, D. C.; June 8, 1921.

Photo-lithographer (male and female); $5.76 to $6.60 per diem; form 304; age, 20 but not 65 years; vacancies in Bureau of Engraving and Printing; June 22, 1921.

Preparator, Division of Insects (male and female): $85 a month; form 1312; announcement No. 242; age, 18 but not 70 years; vacancies in National Museum, Washington, D. C.; June 8, 1921.

Preparator of fossils (male and female); $1,200 a year; form 1312; age, 20 but not 40 years; vacancies exist in Geological Survey; Washington, D. C.; June 22, 1921.

Reconstruction aide (male and female); $720 to $960 a year; form 1312; announcement No. 76-amended; age, below 70 years; vacancies in Public Health Service throughout United States.[2]

Roentgenologist, $200 to $250 a month; associate roentgenologist, $130 to $180 a month; assistant roentgenologist, $90 to $130 a month; junior roentgenologist, $70 to $90 a month; form 1312; announcement No. 249; age, 18 years but not 70 years; vacancies in Public Health Service throughout United States; August 1, 1921 (male and female).[1]

Scientific assistant in entomology (male and female); $1,440 to $1,800 a year; form 1312; announcement No. 252; age, below 40 years; vacancies in Bureau of Entomology, Department of Agriculture, Washington, D. C.; June 8, 1921.

Senior signal engineer, grade 1 (male and female); $3,600 a year; form 1312; announcement No. 251; age, 30 but not 55 years; vacancies in the Bureau of Safety, Interstate Commerce Commission, June 7, 1921.[1]

Special agent for industrial rehabilitation, $3,500 a year; special agent for agricultural rehabilitation courses, $2,500 to $3,500 a year; agent in agricultural education, $3,000 to $4,000 a year; form 2118; announcement No. 264; age, below 70 years; vacancies under Federal Board for Vocational Education; June 14, 1921 (male and female).[1]

Specialist in market extension (male and female); $3,000 to $4,500 a year; form 2118; announcement No. 261; age, below 50 years; vacancies in Bureau of Markets, Department of Agriculture, Washington, D. C.; June 21, 1921.[1]

High school teachers, $1,200 to $1,800 a year; primary specialists, $1,500 to $2,000 a year; model primary teachers, $1,400 to $1,600 a year (male and female); form BIA-2; announcement No. 31-amended; age, 21 to 40 years; vacancies in Philippine Service.[2]

Typewriter repair man (male and female); $900 to $1,800 a year; form 1800; announcement No. 248; age, 18 but not 65 years; vacancies exist in Departmental Service, Washington, D. C.; June 7, 1921.[1]

Valuation aid (oil and gas) (male and female); $1,200 to $2,500 a year; form 1312; announcement No. 234-amended; age, 21 but not 55 years; vacancies in Income-Tax Unit, Internal Revenue Bureau, Treasury Department; July 1, 1921.

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[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that date.

[2] Nonassembled. Applications will be received at any time until further notice.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Deceased and Insane Employees.

The estates of the following deceased or insane employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

DECEASED.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Thomas Bramble.....	38445	Montserrat.....	Panama.....	Mechanical Division...	May 15, 1921.
Albert Harrison.....	26344	Jamaica.....	Camp Bierd.....	Panama Railroad.....	May 13, 1921.
Eustace Samuel Markland, *alias* Eustis Markland.....	22158	Jamaica.....	La Boca.....	Panama Railroad.....	May 13, 1921.
Arnold A. Prescott....	49229	Barbados.....	La Boca.....	Coaling Station.....	May 13, 1921.

INSANE.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of commitment.
Homer Carter.....	51391	Barbados.....	.....	Coaling Station.....	April 20, 1921.

Official Circulars.

Chief Justice White.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 20, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

As a mark of respect for the late Chief Justice White, who died on May 19, all flags on Panama Canal and Panama Railroad buildings and floating equipment will be displayed at half mast on Saturday, May 21, the day of the funeral. All employees whose services can be spared may be excused from duty from 2 o'clock for the balance of the afternoon of that day. The time for those excused will be carried the same as Sunday time.

JAY J. MORROW,
Governor, The Panama Canal.
President, Panama Railroad Company.

Discharge.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 18, 1921.

CIRCULAR No. 604-6:

1. The Executive Order of February 2, 1914, provides:

"Sec. 9. * * * The Governor may discharge an employee at any time for cause, and terminate a provisional appointment when the exigencies of the service require."

REDUCTION OF FORCE.

2. In reducing force the following considerations, in the order stated, will govern in selecting employees to be discharged: Citizenship, efficiency, veteran preference, and seniority.

3. *Citizenship*—Persons who are not citizens of the United States or of Panama will be discharged first, regardless of efficiency; and citizens of the United States will have preference over Panamans, unless the latter are more efficient.

4. *Efficiency*—The relative efficiency of the employee in the class of work he is doing will be the second consideration, in which connection the term "efficiency" shall be considered to include the employee's conduct. Employees with equal service ratings in workmanship and conduct shall be considered equal in efficiency; and where the ratings of two employees are not identical, but the one receives the same rating in workmanship as the other receives in conduct, and *vice versa*, they shall be similarly considered equal in efficiency. Thus, if two men are being considered for reduction of force and one is rated "excellent" in workmanship and "very good" in conduct, and the other "very good" in workmanship and "excellent" in conduct, they shall be considered equal in efficiency.

5. *Veteran preference*—As between two employees, both citizens of the United States, whose efficiency is equal, the one entitled to military preference shall be retained in case of reduction of force, provided:

(*a*) Such veteran preference shall not operate against an employee who has been continuously in the service since prior to the entry of the United States into the World War, on April 6, 1917;

(*b*) That a veteran whose seniority also antedates our entry into the World War shall have preference over a nonveteran; and

(*c*) That the veteran preference rule shall have no effect as to those classes of employees who have been definitely guaranteed, either by published circular or by agreement, that seniority in their respective crafts will govern in reduction of force.

6. *Seniority*—Length of service shall be the determining factor only when a decision can not be made under the rules previously stated in this circular. Length of service does not mean total continuous service on the Canal or railroad force, but in a particular class of employment. For example, the seniority of clerks is determined by the length of service in clerical positions, and the seniority of foremen by length of service as foremen in the same general line of work, and the dates of promotion from grade to grade do not affect the question. If an employee were transferred from a clerical position to shopwork or outside construction work and the question of his seniority came up under a proposed reduction of force, his service as a clerk would not be counted. Previous service in a class of employment closely related to the class in which a reduction is made, may be given consideration when other conditions and the qualifications of the men concerned are approximately equal.

7. Whenever practicable an employee should be given notice of reduction of force 5 days prior to the effective date thereof. An additional 5 days without pay (or as a charge against his leave if any be due) shall also be allowed, in which to endeavor to procure other employment, so that the employee may forfeit none of the privileges incident to continuous service if work is found.

8. When a reduction in force of gold employees is contemplated the Executive Office should be notified thereof in writing as far in advance of the

effective date as practicable, in order that an effort may be made to find work elsewhere in the organization for the men to be discharged, and to give advance information concerning steamship transportation requirements.

FURLOUGH.

9. It is the policy of the Canal and the railroad to maintain the minimum force which will permit of the work being properly accomplished, and when, due to what is considered to be a temporary lull in the work, or other temporary cause, there is an excess of employees, furloughs may be granted, in rotation, in the craft, section, division, or department concerned, and in such an event the employees affected shall not have the right to demand a reduction of force in lieu thereof. The employee shall be advised of the effective date of his furlough not later than the day previous thereto.

10. This circular supersedes paragraphs 1 to 5, inclusive, of Circular No. 604, and also Circular No. 604-5.

JAY J. MORROW,
Governor, The Panama Canal.
President, Panama Railroad Company.

Member of Wage Board and Board on Complaints.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 20, 1921.

To all concerned—Effective this date, Maj. C. S. Ridley, Assistant Engineer of Maintenance, is appointed a member of the Board of Rates of Pay (Gold Roll) and of the Board of Complaints, *vice* the Engineer of Maintenance.

JAY J. MORROW,
Governor.

Department of Operation and Maintenance.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 20, 1921.

CIRCULAR No. 660-53:

1. The appointment of Maj. C. S. Ridley as Assistant Engineer of Maintenance is hereby announced, effective May 10, 1921.

2. Pending the arrival of the Engineer of Maintenance, the following divisions of the Department of Operation and Maintenance will be under the supervision of the Assistant Engineer of Maintenance, and the officials in charge of same will report to him:

The Division of Lock Operation.
The Office Engineer.
The Section of Meteorology and Hydrography.
The Section of Surveys.
The Division of Municipal Engineering.
The Building Division (until June 1).

3. The officials in charge of the remaining divisions of the Department of Operation and Maintenance will continue to report direct to the Governor.

JAY J. MORROW,
Governor.

Acting Assistant to Superintendent, P. R. R.

PANAMA RAILROAD COMPANY,
OFFICE OF SUPERINTENDENT,
BALBOA HEIGHTS, C. Z., May 16, 1921.

All concerned—Effective this date, and during the absence of Mr. Robert Beverley on leave, Mr. Charles W. Lee will be Acting Assistant to the Superintendent, Panama Railroad Company.

S. W. HEALD,
Superintendent.

Approved:
JAY J. MORROW,
President.

Gatun Storehouse.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 18, 1921.

All concerned—The storehouse operations heretofore conducted under the supervision of the district quartermaster at Gatun have been discontinued. The stock on hand has been transferred to the custody of the storekeeper of the Supply Department, Cristobal, who will arrange for daily truck service to Gatun, by means of which delivery of material required by departments and divisions of The Panama Canal in the Gatun district will be effected.

Foreman's orders covering the required material should be mailed to the storekeeper at Cristobal in ample time to insure their receipt on the day preceding that on which delivery of material is desired. Emergency deliveries only will be arranged by telephone to the storekeeper.

R. K. MORRIS,
Chief Quartermaster.

Railroad Trains Decoration Day.

PANAMA RAILROAD COMPANY,
OFFICE OF MASTER OF TRANSPORTATION,
BALBOA HEIGHTS, C. Z., May 24, 1921.

CIRCULAR No. 1814:

To all concerned—On account of Monday, May 30, being a legal holiday, the Panama Railroad will operate Sunday schedule on the main line that day.

Local freights will not run May 30.

W. J. BISSELL,
Acting Master of Transportation.

Approved:
S. W. HEALD,
Superintendent.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., May 23, 1921.

Insufficiently addressed mail matter for the following has been received in the office of the Director of Posts and may be obtained upon the request of the addressees. Request for forwarding may be made by telephone, calling No. 182, Balboa:

Beaffit, Miss Elfreda
Beatie, Mrs. Mary[1]
Black, Miss Ethel
Burns, Jaurence J.
Carter, Miss Rosa
Dehalle, T., Box 763
De May, Mrs. S.[1]
Etchberger, T. N., Box 230.
Faby, Mrs. M. E.
Floyd-Wells Co.
Frucei, Frank
Fulton, Ernest
Gilbert, Mrs. G. H., Box 151.[1]
Hanniford, J.[1]
Heite, Mrs. W. B., Box 482.[1]
Holtzhouser, Fred
Kaufman, W. K., Box 486.
Laurenzo, Guiseppe
Melhado, Capt. Clifford
Norris, Mrs. Roy, Box 106.
Ragan, Geo. W.
Phares, E. S.
Wilson, Lyle.[1]
Woodcock, Mrs. F., Box 237.[1]
Willis, C. B.[1]

[1] Paper.

Sale of Tug "Sanidad."

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., May 31, 1921, and then opened for the purchase of the tug *Sanidad*. Description and form of proposal may be had upon application. The Panama Canal reserves the right to reject any or all bids.

Sale of Barge No. 222.

Sealed bids will be received in the office of the Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z., up to 10.30 a. m., May 31, 1921, and then opened, for the purchase of steel barge *No. 222*. Description and form of proposal may be had upon application. The Panama Canal reserves the right to reject any or all bids.

Sale of Typewriters.

The Panama Canal has for sale a number of used Underwood typewriters at reasonable prices. Some of these machines are at Balboa storehouse and others at Cristobal storehouse, where they may be inspected and purchased direct.

Eggs for Setting.

For a limited period only purchases of eggs for setting may be made at the Summit poultry farm at the following prices:

White Leghorn or Rhode Island Red, per setting of 15 eggs, $3; two settings, or 30 eggs, $5.50.

All sales f. o. b. Summit.

Sale of Laying Mash.

The Summit Poultry Farm has on hand about 6,000 pounds of laying mash, in excess of the amount required, which is offered for sale at $7.42 per cwt. f. o. b. Summit poultry farm. Orders should be placed on the Superintendent of the Cattle Industry Division, Cristobal.

Empty Barrels and Packing Cases for Sale.

Address inquiries to Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z.

Sale of Lumber.

The Panama Canal has on hand at Balboa storehouse considerable quantities of 1″ x 6″, 1″ x 8″, and 1″ x 10″ dressed lumber, Douglas-fir, grade 1, select common. Further information will be furnished by General Storekeeper, Balboa, or at office of Chief Quartermaster, Balboa Heights.

Additions to Commissary Stock.

Grocery Section.

Sirup, corn, 1-oz. tin $0.10

Hardware Section.

Chinaware, Doulton, plates, dinner, Cecil, 10″, D-2716, ea..... 1.10

Locations of Patients, and Visiting Hours, at Ancon Hospital.

The following table shows the distribution of patients in the new Ancon Hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Present number of beds.	Visiting hours.
Section "A"—White American, male:		Tuesdays, Thursdays, and Saturdays, 2 to 4.30 p. m. and 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11 a. m. and 2.30 to 4.30 p. m.
Ward No. 1, Medical, Eye and Ear	44	
Ward No. 2, Medical, Eye and Ear	41	
Ward No. 3, Surgical	44	
Ward No. 4, Surgical	41	
Cells (2)	2	
	172	
Section "B":		
White American, female	23	Daily except Sunday, 2 to 4.30 p. m.; 6.30 to 8 p. m. Sundays and holidays, 10 to 11 a. m.; 2 to 4.30 p. m. 6.30 to 8 p. m.
White foreign, female	15	
Nursery	16	No visitors permitted.
Private rooms (40)	46	Daily, 9.30 to 11 a. m.; 2 to 4.30 p. m.; 6.30 to 8 p. m.
Cells (2)	2	
	102	
Section "C":		
Ward No. 9, White foreign, male	39	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 10, Colored, eye and ear, convalescent medical	39	
Ward No. 11, Colored Acute surgical	39	
Ward No. 12, Colored Acute medical	39	
Ward No. 13, Colored Convalescent surgical	39	
Ward No. 14, Colored Convalescent surgical	39	
Cells (6)	6	
Rooms (7)	7	
	247	
Section "D":		
Ward No. 15	41	
Ward No. 16	39	
Ward No. 17, Colored children	32	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 18, White children	30	Daily, 9.30 to 10 a. m.; 2 to 4 p. m.
Ward No. 19, Colored female medical	41	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 20, Colored female surgical	34	
Rooms (6)	6	
Cells (6)	6	
	229	
Isolation:		No visitors permitted.
Floor No. 1	14	
Floor No. 2	29	
Floor No. 3	28	
Floor No. 4	28	
	99	
Total number of beds	849	

Emergency passes are issued only by and in the discretion of the section nurse.

Rates at Hotel Aspinwall, Taboga.

BOARD AND LODGING.

Nonemployees:		
Adults	per day	$3.50
Adults, week or month's stay	per day	2.50
Children under 2 years of age		Free
Children, 2 to 5 years, inclusive	per day	1.00
Children, 2 to 5 years, week or month's stay	per day	.80
Children, over 5 years, under 12 years	per day	1.75
Children, over 5, under 12 years, week or month's stay	per day	1.25
Employees:		
Adults	per day	2.75
Adults, week's stay	per day	2.00
Adults, month's stay	per mo.	54.00
Children, under 2 years		Free
Children, 2 to 5 years, inclusive	per day	75
Children, 2 to 5 years, week or month's stay	per day	.60
Children, 6 years and under 12 years	per day	1.25
Children, 6 years and under 12, week or month's stay	per day	1.00
For employee's family of 4 paying members, or more, staying at the hotel at the same class of rate, a reduction of 10 per cent is allowed, not including servants.		
Servants:		
For nonemployees	per day	1.50
For employees	per day	1.25

The above rates apply to Class B rooms.

Front rooms on the second floor of the main building or second floor of the annex are classed as "Class A" rooms, and an additional charge of 25 cents a day for each person occupying a bed in one of these rooms is made.

Temporary bedrooms are classed as "Class C," and a deduction of 25 cents a day from above rates will be made for an occupant of a bed in these rooms.

Route Service Jitney—Cristobal-Mt. Hope.

The following is the schedule of the official jitney service between the Terminal building at Cristobal and Mount Hope. Cars stop at the office of the Commissary Division each way:

Leave Terminal Building.		Leave Mount Hope.	
A. M.	P. M.	A. M.	P. M.
8.00	12.30	8.15	12.45
8.30	1.00	8.45	1.15
9.00	1.30	9.15	1.45
9.30	2.00	9.45	2.15
10.00	2.30	10.15	2.45
10.30	3.00	10.45	3.15
	3.30		3.45

Schedule of the Ancon-Balboa Bus Line.

Leave Ancon clubhouse 3 p. m., 3.30 p. m., 4 p. m., and every 15 minutes thereafter until 10.45 p. m.

Leave Balboa clubhouse 2.45 p. m., 3.15 p. m., 3.45 p. m., and 4.15 p. m., and every 15 minutes thereafter until 10.30 p. m. There will be no 10.45 p. m. bus from Balboa, but one will leave at 11 p. m.

Taboga Launch Schedule Effective May 1, 1921.

	A. M.
From dock No. 19, Balboa every day, including Sundays and holidays...	10.30
	P. M.
Saturdays and days preceding holidays	5.00
From Taboga:	P. M.
Week days	12.30
Sundays and holidays	6.30

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies, including the 25 per cent surcharge, effective May 1, 1921:

Commodities.	Unit.	Price.
Brass, bar, average	Lb.	$0.31
Brass, sheet, average	Lb.	.55
Bronze, Tobin, average	Lb.	.35
Cement, at Panama:		
Including bags and surcharge	Bag	1.66
Credit for empty bags returned	Bag	.15
Cement, at Colon:		
Including bags and surcharge	Bag	1.49
Credit for empty bags returned	Bag	.15
Charcoal	Cwt.	1.63
Gasoline, motor grade	Gal.	.40
Lead, sheet, average	Lb.	.125
Lead, pig	Cwt.	11.68
Lumber, yellow pine or fir, except ceiling	M ft. B. M.	77.50
Lumber, ceiling, siding, and flooring, 1" x 6"	M ft. B. M.	96.25
Lumber, flooring, 1" x 3" and 1" x 4"	M ft. B. M.	108.75

Schedule of Official Jitney Service.

Following is the schedule of the official jitney plying between Balboa shops and the Ancon police station, carrying employees in the conduct of official business, upon presentation of passes issued by the Chief Quartermaster or of the "special pass" issued by the Governor:

FROM ANCON POLICE STATION TO BALBOA SHOPS.

Police Station	Leave on the hour and half hour.
Administration Building	Leave 7 minutes and 37 minutes after the hour.
Balboa Commissary	Leave 10 minutes and 40 minutes after the hour.
Balboa shops	Arrive 15 minutes and 45 minutes after the hour.

FROM BALBOA SHOPS TO ANCON POLICE STATION.

Balboa shops	Leave 15 minutes and 45 minutes after the hour.
Port Captain's Office	Leave 18 minutes and 45 minutes after the hour.
Balboa Commissary	Leave 20 minutes and 50 minutes after the hour.
Administration Building	Leave 25 minutes and 55 minutes after the hour.
Ancon Police Station	Arrive on the hour and half hour.

COMMISSARY NOTES.

Chinaware.

Word has recently been received from the commissary's London connection that the china works of Minton's are at present closed down through lack of fuel, owing to the coal strike in Great Britain. Consequently, no definite date for delivery of items of chinaware now on order can be promised.

Linen.

The output of linen is still curtailed due to limited flax acreage and high labor costs. The situation is such that Ireland is producing but little and no flax whatever is being received from Russia. As a result, the linen stocks in the commissaries will not be back to prewar status for a long time to come. In view of the sustained demand and the small supply, prices asked for goods are quite reasonable.

Price Reduction—Books.

Some time since there appeared in these columns notice that publication of Every Man's Library had been discontinued. In order to dispose of books in this series on hand at Ancon, Balboa, Cristobal, Gatun, and Pedro Miguel commissaries the price on the leather edition has been reduced from $1.70 to $1.25 and on those in the cloth binding from 80 cents to 60 cents. A wide range of titles still remain.

A price reduction on books became effective May 25. Included in this number are many novels of adventure and romance, short stories by D'Anunzio, Hickens, and others, and a few juveniles. In the list of nonfiction are biographies of Leonard Wood, of Mark Twain, and of Charles Comiskey, "The Swing in Golf and How to Learn It," "The Non-Partisan League," "The Industrial Republic," "Domestic Science," etc.

PANAMA RAILROAD PASSENGER TRAIN TIME-TABLE No. 32, EFFECTIVE JUNE 1, 1921.

MAIN LINE STATIONS.		Sunday only.	Sat'day only.	DAILY.		
		11	9	7	5	3
Leave		P. M.	P. M.	P. M.	A. M.	A. M.
Colon	.....	9.35	11.30	5.00	11.00	7.10
Mount Hope	.....	9.40	11.35	5.05	11.05	7.15
Fort Davis	.....	9.49	11.44	5.14	11.14	7.24
Gatun	.....	9.54	11.49	5.19	11.19	7.29
			A. M.			
Monte Lirio	.....	10.09	12.04	5.34	11.34	7.44
Frijoles	.....	10.19	12.15	5.45	11.45	7.55
Darien	.....	10.26	12.22	5.52	11.52	8.00
					P. M.	
Gamboa	.....	10.37	12.33	6.04	12.04	8.16
Summit	.....	10.49	12.45	6.16	12.16	8.32
Pedro Miguel	.....	11.01	12.57	6.26	12.28	8.46
Red Tank	.....	11.04	1.00	6.28	12.31	8.49
Miraflores Locks	.....	11.09	1.05	6.32	12.35	8.53
Fort Clayton	.....	11.11	1.07	6.35	12.38	8.56
Corozal	.....	11.14	1.10	6.40	12.44	9.00
Balboa Heights	.....	11.20	1.15	6.45	12.50	9.05
Panama	.....	11.25	1.20	6.50	12.55	9.10
Arrive		P. M.	A. M.	P. M.	P. M.	A. M.
		11	9	7	5	3

MAIN LINE STATIONS.	DAILY.			Sat'day only.	Sunday only.	
	4	6	8	10	12	
Leave	A. M.	A. M.	P. M.	P. M.	P. M.	
Panama	7.10	11.00	5.00	11.30	9.35	.....
Balboa Heights	7.15	11.05	5.05	11.35	9.40	.....
Corozal	7.21	11.12	5.10	11.41	9.46	.....
Fort Clayton	7.25	11.16	5.14	11.44	9.49	.....
Miraflores Locks	7.28	11.19	5.17	11.46	9.51	.....
Red Tank	7.32	11.22	5.21	11.49	9.54	.....
Pedro Miguel	7.36	11.25	5.25	11.53	9.58	.....
				A. M.		
Summit	7.48	11.37	5.37	12.05	10.10	.....
Gamboa	8.00	11.49	5.49	12.17	10.22	.....
Darien	8.09	11.59	5.59	12.28	10.32	.....
		P. M.				
Frijoles	8.17	12.07	6.07	12.35	10.39	.....
Monte Lirio	8.29	12.19	6.18	12.46	10.50	.....
Gatun	8.44	12.34	6.34	1.01	11.05	.....
Fort Davis	8.48	12.38	6.38	1.03	11.08	.....
Mount Hope	8.55	12.45	6.45	1.10	11.15	.....
Colon	9.00	12.50	6.50	1.15	11.20	.....
Arrive	A. M.	P. M.	P. M.	A. M.	P. M.	.....
	4	6	8	10	12	

All trains stop where time is shown.

Sunday only	DAILY			Daily except Sunday	DAILY			
67	56	63	61	59	57	55	53	51
A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.	A. M.	A. M.
12.30	11.05	7.30	5.30	3.30	1.00	10.00	7.45	6.10
12.32	11.07	7.32	5.32	3.32	1.02	10.02	7.47	6.12
12.34	11.09	7.34	5.34	3.34	1.04	10.04	7.49	6.14
12.37	11.12	7.37	5.37	3.37	1.07	10.07	7.52	6.17
12.43	11.18	7.43	5.43	3.43	1.13	10.13	7.58	6.23
12.49	11.24	7.49	5.49	3.49	1.19	10.19	8.04	6.29
12.55	11.30	7.55	5.55	3.55	1.25	10.25	8.10	6.35
A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.	A. M.	A. M.
67	65	63	61	59	57	55	53	51

FORT RANDOLPH BRANCH STATIONS		DAILY				Daily except Sunday	DAILY			Sunday only
		52	54	56	58	60	62	64	66	68
Leave	Arrive	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.
Third Street, Colon		7.05	8.40	10.55	1.55	4.25	6.25	8.25	11.59	1.25
Seventh Street		7.03	8.38	10.53	1.53	4.23	6.23	8.23	11.57	1.23
Cristobal Commissary		7.01	8.36	10.51	1.51	4.21	6.21	8.21	11.55	1.21
Tower "B"		6.58	8.33	10.48	1.48	4.18	6.18	8.18	11.53	1.18
France Field		6.50	8.25	10.40	1.40	4.10	6.10	8.10	11.45	1.10
Coco Solo Station		6.45	8.20	10.35	1.35	4.05	6.05	8.05	11.40	1.05
Fort Randolph		6.40	8.15	10.30	1.30	4.00	6.00	8.00	11.35	1.00
Arrive	Leave	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.
		52	54	56	58	60	62	64	66	68

THE PANAMA CANAL RECORD

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Government Vessels Which Pay No Tolls.

Noncommercial Traffic Through the Panama Canal During Calendar Year, 1920.

The following is a statement of government vessels, other than Canal equipment, passing through the Panama Canal free of tolls, during the calendar year 1920.

In the tonnage figures here shown, Panama Canal net tonnage is given on colliers, tankers, transports, cargo and supply ships, and displacement tonnage on battleships, cruisers, destroyers, minelayers, etc., where the Panama Canal net tonnage is not ascertainable. There has been no duplication in tonnage figures.

In arriving at the amount of tolls these vessels would have paid if commercial rates had been assessed, the following method was used:

(*a*) Merchant vessels chartered by the United States Government.
(*b*) Navy cargo ships, supply ships, colliers, tankers.
(*c*) Army and Navy transports.
(*d*) Hospital ships.

If carrying cargo or passengers, $1.20 per net ton, Panama Canal measurement, providing this did not exceed the sum of the United States equivalent tonnage times $1.25.

If without cargo or passengers, 72 cents per net ton, Panama Canal measurement, providing this did not fall below the sum of the United States equivalent tonnage times 75 cents.

(*e*) Warships, cruisers, minesweepers, destroyers, submarines, etc., 50 cents per displacement ton.

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Number and type of vessels:			
United States Navy—			
Ammunition ship	.....	1	1
Battleships	7	6	13
Colliers and tankers	16	12	28
Cruisers	2	.....	2
Destroyers	18	2	20
Eagle boats	15	2	17
Gunboats	2	2	4
Hospital ships	2	.....	2
Minesweepers	17	2	19
Subchasers	2	3	5
Submarines	23	15	38
Supply ships	7	4	11
Tenders—			
Destroyers	1	1	2
Submarine	.....	1	1
Transports	2	.....	2
Tugs	11	4	15
Others	3	.....	3
United States Army—			
Mine planters	2	1	3
Transports	4	2	6
Tug	1	.....	1
United States Treasury Department—			
Eagle boat	1	.....	1
Tug	1	.....	1
Vessels carrying Government supplies	29	.....	29
Totals	166	58	224

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Panama Canal net tonnage:			
United States Navy—			
Ammunition ship	.....	4,406	4,406
Colliers and tankers	84,360	68,938	153,298
Hospital ships	6,502	.....	6,502
Supply ships	12,599	9,535	22,134
Transports	13,558	.....	13,558
United States Army—			
Mine planters	806	403	1,209
Transports	24,441	11,686	36,127
Tug	48	.....	48
Vessels carrying Government supplies	132,354	.....	132,354
Totals	274,668	94,968	369,636
Displacement tonnage:			
United States Navy—			
Battleships	112,000	96,000	208,000
Cruisers	16,880	.....	16,880
Destroyers	21,773	2,316	24,089
Eagle boats	8,650	1,000	9,650
Gunboats	4,686	4,210	8,896
Minesweepers	16,020	1,900	17,920
Subchasers	154	231	385
Submarines	11,185	7,275	18,460
Tenders—			
Destroyers	13,500	13,500	27,000
Submarine	.....	5,970	5,970
Tugs	10,001	4,120	14,121
Other	62	.....	62
United States Treasury Department—			
Eagle boat	500	.....	500
Tug	500	.....	500
Totals	215,911	136,522	352,433
Tolls levied:			
United States Navy—			
Ammunition ship	.....	$5,507.50	$5,507.50
Battleships	$56,000.00	48,000.00	104,000.00
Colliers and tankers	94,914.99	64,871.08	159,786.07
Cruisers	8,440.00	.....	8,440.00
Destroyers	10,886.50	1,158.00	12,044.50
Eagle boats	4,325.00	500.00	4,825.00
Gunboats	2,343.00	2,105.00	4,448.00
Hospital ships	6,712.50	.....	6,712.50
Minesweepers	8,010.00	950.00	8,960.00
Subchasers	77.00	115.50	192.50
Submarines	5,592.50	3,637.50	9,230.00
Supply ships	13,167.85	10,905.10	24,072.95
Tenders—			
Destroyers	6,750.00	6,750.00	13,500.00
Submarine	.....	2,985.00	2,985.00
Transports	13,496.25	.....	13,496.25
Tugs	5,000.50	2,060.00	7,060.50
Other	31.00	.....	31.00
United States Army—			
Mine planters	580.32	290.16	870.48
Transports	27,043.15	14,023.20	41,066.35
Tug	34.56	.....	34.56
United States Treasury Department—			
Eagle boat	250.00	.....	250.00
Tug	250.00	.....	250.00
Vessels carrying Government supplies	139,111.90	.....	139,111.90
Totals	403,017.02	163,858.04	566,875.06
Cargo carried:			
United States Navy—			
Ammunition ship	.....	94	94
Colliers and tankers	112,736	4,836	117,572
Hospital ships	6,900	.....	6,900
Supply ships	11,636	3,336	14,972
Transports	11,802	.....	11,802
United States Army—			
Transports	12,032	889	12,921
Vessels carrying Government supplies	204,291	.....	204,291
Totals	359,397	9,155	368,552

First Pacific Coast Motorship.

On May 20, the American motorship *Kennecott* passed through the Canal on a voyage from Aberdeen, Wash., to New York. It is said to be the first all steel motorship built by a Pacific Coast transportation company for operation on the high seas. The *Kennecott* is a vessel of 6,010 deadweight tons, 360 feet overall, with a beam of 49 feet 6 inches, and a loaded draft of 22 feet 3 inches. She is equipped with two 4-cycle Diesel engines driving twin screws and with electrically operated deck machinery. The total indicated horsepower is 2,400, and the speed loaded 11½ knots. Fuel oil is carried in the double bottom tanks and in a tank between the shaft alleys. The fuel consumption on her trial trip was at the rate of only 55 barrels (under 8 tons) a day. This gives her a cruising radius of 22,000 miles. On her voyage through the Canal the *Kennecott* carried a cargo of 5,350 tons of lumber and copper. Her net Panama Canal tonnage is 3,755.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended May 28:

Spanish cruiser *España*, docking, cleaning and painting bottom; repairing hull forward where damaged through grounding; miscellaneous minor repairs to hull and engineer's departments, consisting of repairs to drains and vent and sounding pipes in engine rooms; overhauling various pumps; renewing suction and discharge lines to circulators; repairing ash hoist trunk; renewing discharge pipes on ash ejectors; manufacturing evaporator coils; manufacturing one boat boom; repairing and reriveting torpedo net platform, and renewing miscellaneous eye pads and ringbolts on deck; examining rudder; overhauling sea valves and zincs on hull; steamships *Eastern Guide*, adjusting main engine crosshead and guides; cleaning and refitting H. P. piston rod packing; rebabbiting and boring spare crosshead brasses; repairing air chamber to beam feed pump; grinding-in and assembling evaporator relief valve; repairing and refitting brackets to main feed line; adjusting steering engine, fan engine, and circulator bearings; *Mevania*, manufacturing set of H. P. rings for main engine and installing spare L. P. rings; cleaning center boiler and renewing zincs; tug *Gorgona*, removing oil and installing new air pump; performing miscellaneous repairs to main engine; repairing refrigerating system, anchor windlass, sanitary pump, towing machine; repairing whistle, examining circulators, renewing studs for boiler manhole plate, and performing miscellaneous pipe work; cementing up main deck in wake of steam and exhaust pipes to towing machines; renewing clips on ventilators; renewing various cover boards, facia, molding, etc., and renewing other miscellaneous woodwork; steamships *Birmingham City*, renewing L. P. piston rod, piston, follower, and packing rings, main engine; lining up L. P. engine; *Lompoc*, changing wildcats on windlass; repairing starboard hawse pipe; motor schooner *Laura C. Hall*, forging 2 new clutch arms for main engine; launches *Coco Solo*, renewing stem; repairing monkey rails and repairing copper sheathing; *Taboga*, renewing exhaust pipe and fittings; renewing stem; recalking hull and renewing copper sheathing as necessary; renewing sections of plank amidships where broken; renewing approximately 50 per cent of garboard strakes, port and starboard; renewing upper and lower fenders, port and starboard; renewing wood decking, beams and covering board; renewing monkey rail, and performing other hull repairs; supply boat *No. 2*, repairing fenders where damaged; recanvasing main deckhouse deck.

The following vessels were at the Cristobal shops for repairs during the week ended May 30:

Barge *No. 116*, dock and undock; test all compartments and stop leaks; repair A-frames, sheathing, fenders, etc.; motor schooner *Laura C. Hall*, dock and undock; renew planks on bottom as directed; repair foundation of port engine; replace flywheel key on port engine, etc.; U. S. submarine *R–25*, remove anchor gear; increase clutch clearance; install listening apparatus, etc.; steamships *Bakersfield*, refit spare crank brass; *G. D. Schofield*, install new propeller blade; *Silverado*, remove old and install new tail shaft and work in connection therewith; *Eastern Guide*, repair ice machine; *Robin Goodfellow*, *Balboa*, U. S. submarine *R–1*, steamships *Moerdijk*, *Honduras*, U. S. submarine *R–7*, steamships *Toloa*, *Tamar*, dredge *No. 86*, steamships *Abangarez*, *Harold Walker*, minor repairs.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight May 28, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage,	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Selma City	21	23.25	22	6.33	22	14.08	22	15.20	American	United States Steel Products Co.	424.0	56.0	26.0	Mobile	Yokohama	General, steel	7,684	7,539	5,448
La Habra	22	7.40	22	8.00	22	15.27	22	16.38	Norwegian	W. Wilhelmsen	425.0	56.0	26.6	Puerto Lobos	San Francisco	Crude oil	9,700	7,053	5,051
Mevania	22	11.35	22	11.50	22	19.19	...	...	American	Walker & Daley	425.0	57.0	27.6	Tampico	Balboa	Fuel oil	9,000	7,485	5,212
Steel Inventor	23	1.30	23	7.20	23	16.05	23	16.15	American	United States Steel Products Co.	424.2	56.2	26.6	New York	Seattle	General	8,200	7,539	5,448
Port Napier	23	10.45	23	11.20	23	18.07	23	19.05	British	Commonwealth and Dom. Line	490.3	61.4	24.4	London	Lyttleton	General	2,770	10,987	8,165
Alvarado	23	10.40	24	6.13	24	13.37	24	15.05	American	Pacific Transport Co	245.0	41.5	16.0	New Orleans	San Francisco	...	200	2,122	1,504
Ulysses	21	17.30	24	12.27	24	19.07	25	13.10	Dutch	Royal Netherlands W. I. Mail	346.2	48.2	15.6	Amsterdam	Corral	General	2,690	4,145	3,057
Cape Romain	25	12.05	25	12.57	25	20.05	25	21.25	American	Atlantic Gulf & Pacific S. S. Co.	376.4	52.3	24.6	Baltimore	Los Angeles	General, sulphur	5,810	5,142	3,568
Cauca	23	11.30	26	6.05	26	13.29	26	15.05	British	Pacific Steam Navigation Co.	246.0	35.0	17.4	Cristobal	Corinto	Ballast	...	1,448	1,023
Jamaica	23	17.59	26	6.05	26	14.12	26	19.10	British	Pacific Steam Navigation Co.	220.1	34.1	13.6	Cartagena	Tumaco	General, salt	850	1,138	622
Wangaratta	26	6.07	26	6.45	26	14.36	26	15.55	British	British India Steam Nav. Co.	450.0	58.0	26.4	Glasgow	Wellington	Coal	3,334	7,897	5,227
Honduras	25	13.01	26	11.32	26	19.08	26	20.17	French	French Line	389.0	51.0	17.6	Bordeaux	Guayaquil	General	468	5,923	4,363
Harry Luckenbach	27	6.15	27	6.55	27	14.21	27	15.04	American	Luckenbach Line	448.9	60.2	20.2	New York	San Francisco	General	...	9,262	6,733
Arawa	26	19.35	27	10.50	27	17.25	27	18.30	British	Shaw, Saville & Albion Co	459.5	60.5	25.1	London	Wellington	General	3,500	10,035	7,504
Agamemnon	27	6.25	27	12.00	27	18.50	27	20.30	British	Alfred Holt & Co	442.1	52.0	27.8	New York	Shanghai	General	...	6,921	4,873
Esther Dollar	27	13.30	27	13.50	27	20.18	27	21.50	British	Dollar Steamship Line	483.6	56.0	23.0	New York	Vancouver	General	4,400	9,856	7,133
Camden [1]	11	1.25	28	6.00	28	15.30	...	...	American	United States Navy	388.0	47.6	23.8	Key West	San Diego	...	...	...	...
R-1, 2, and 3 [2]	11	12.57	28	6.00	28	13.55	...	...	American	United States Navy	184.0	18.0	14.6	Key West	San Diego	...	...	...	...
R-4 and 5 [2]	11	12.57	28	6.00	28	14.05	...	...	American	United States Navy	184.0	18.0	14.6	Key West	San Diego	...	...	...	...
R-6 and 7 [2]	11	12.57	28	6.00	28	14.07	...	...	American	United States Navy	184.0	18.0	14.6	Key West	San Diego	...	...	...	...
R-8 and 10 [2]	11	12.57	28	6.00	28	15.07	...	...	American	United States Navy	184.0	18.0	14.6	Key West	San Diego	...	...	...	...
Manavi	7	18.45	28	8.20	28	16.04	28	17.20	British	Pacific Steam Navigation Co.	216.0	35.1	11.6	Cristobal	Guayaquil	General	...	1,357	884
Port Albany	28	12.45	28	13.10	28	19.40	28	20.50	British	Commonwealth and Dom. Line	426.3	54.1	23.0	New York	Sydney	General	2,711	...	...

[1] Subtender. [2] Submarines.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Laura C. Hall	20	17.25	22	6.26	22	15.10	...	...	British	Pacific Metals Corporation	81.0	25.6	10.0	Buenaventura	Cristobal	(4)	64	130	69
Ottar	21	8.45	22	6.40	22	14.15	23	6.34	Norwegian	J. C. Knudsen	262.6	37.0	14.3	Guayaquil	New York	General	730	1,815	1,222
Otarama	21	23.45	22	8.00	22	14.53	22	15.40	British	New Zealand Shipping Co	454.5	56.3	24.0	Wellington	Liverpool	(5)	9,000	9,781	5,518
Urubamba	22	0.45	22	9.14	22	16.18	29	6.24	Peruvian	Peruvian Steamship Line	381.2	41.1	18.6	Callao	Cristobal	General	1,938	4,803	2,951
Miraflores [3]	...	...	22	10.55	22	18.20	23	10.50	American	W. B. Hayden of Galveston	119.6	23.0	12.5	Balboa	Galveston	Ballast	...	217	36
Bessie Dollar	22	2.30	22	11.10	22	18.24	22	19.03	British	Canadian Dollar Co	369.7	50.0	21.0	Singapore	New York	General, lumber	4,382	5,245	3,991
Saint Andre	22	12.45	22	13.22	22	21.17	24	12.40	French	French Line	397.9	50.3	26.0	Talcahuano	Bordeaux	Nitrate, cereals	6,303	5,917	4,146

[3] Tug. [4] Hats, coffee, and drums. [5] Cold storage and general.

Montgomery City	22	15.00	23	6.51	23	13.45	23	15.55	American	United States Steel Products Co.	424.2	56.2	24.3	Honolulu	New Orleans	Sugar	7,000	7,539	5,448
Ebro	23	6.45	23	9.28	23	16.30	24	10.20	British	Pacific Steam Navigation Co	450.3	57.8	23.4	Coronel	Liverpool	General	3,555	9,089	6,215
Eurymachus	23	12.35	23	13.17	23	20.25	23	22.45	British	A. Holt	400.6	52.3	26.6	Vancouver	Liverpool	(8)	6,943	5,818	3,981
West Haven	22	23.30	23	13.25	23	21.07	23	21.07	American	Atlantic-Gulf Steamship Corp	409.6	54.1	19.0	Vancouver	New York	General	3,775	6,664	5,020
Cauca	23	23.30	24	7.41	24	14.25	26	6.05	British	Pacific Steam Navigation Co	246.0	35.2	17.5	Corinto	Cristobal	(9)	1,318	1,582	1,023
West Isleta	24	1.20	24	8.15	24	15.18	24	15.18	American	N. Atl. & West. S. S. Co. S. B.)	409.8	54.2	19.0	Seattle	New York	Fruit, general	2,332	6,759	4,900
Ohioan	25	0.30	25	7.39	25	14.27	25	14.27	American	American-Hawaiian Line	407.7	53.7	22.6	San Pedro	New York	General	4,420	7,106	5,066
Jalapa	25	0.16	25	7.54	25	16.25	26	12.00	American	Frank Waterhouse (S. B.)	402.6	53.0	27.0	Tacoma	Danzig	Flour, wheat	7,600	6,580	4,856
Moerdijk	25	1.00	25	8.33	25	17.00	26	9.35	Dutch	Holland-American Line	471.0	60.1	24.6	San Francisco	Rotterdam	General	9,294	9,165	6,861
Quilpue	25	5.20	25	10.45	25	17.25	27	12.26	British	Pacific Steam Navigation Co	361.2	46.0	19.9	Guayaquil	New York	General	2,153	4,742	3,023
Silverado	20	15.45	25	11.42	25	20.45	....	....	American	General Steamship Corp. (S. B.)	245.6	42.0	13.6	Valparaiso	Cristobal	Ballast	....	2,460	1,714
Willhilo	25	11.20	25	11.52	25	21.12	25	23.10	American	Williams Steamship Co. (S. B.)	434 4	57.7	23.0	Seattle	Philadelphia	Lumber, general	6,200	7,983	5,882
Lompoc	21	0.01	25	12.51	25	20.55	25	20.55	British	C. T. Bowring	435.3	55.8	20.0	Taltal	Tampico	Ballast	....	7,496	5,311
Mevania	22	19.19	25	13.48	25	21.57	25	21.57	American	Walker & Daley (S. B.)	425.0	57.0	....	Balboa	Tampico	Ballast	....	7,485	5,212
D. G. Schofield	25	13.30	25	14.00	25	21.40	25	21.40	American	Standard Oil Co	439.5	58.0	21.0	San Francisco	Tampico	Ballast	....	8,912	6,254
Katrina Luckenbach	25	15.00	25	15.54	25	23.33	25	23.33	American	Luckenbach Line	446.0	56.1	27.0	Portland	Philadelphia	Lumber, general	7,500	8,508	6,199
									American	George Healey	30.0	7.2	....	Balboa	Gatun		....	....	....
Ben [6]	....	....	....	....	....	....	....	....	American	Arthur L. Crowley	119.0	27.7	13.7	Papeete	New York		....	213	172
Genesee [7]	19	23.45	26	6.18	26	15.05	26	15 05	American	Colombian Maritime Co	190.0	29.1	14.2	Corinto	Cristobal	Coffee	580	741	350
Balboa	26	3.30	26	7.45	26	15.00	30	11.12	British	Shaw, Saville & Albion Co	477.5	63.1	23.0	Wellington	London	(8)	4,295	11,229	8,252
Waimana	26	9.30	26	10.44	26	18.10	26	20.10	American	Williams Dimond & Co. (S. B.)	410.5	54.3	25.0	Seattle	Liverpool	Wheat, general	6,682	6,593	4,924
Bakersfield	26	17.05	27	6.40	27	15.00	30	23.59	British	American Metral Transp. Co	251.0	43.6	21.0	Iquique	Savannah	Nitrate	3,250	2,444	1,571
North American	27	10.20	27	11.39	27	18.30	27	21.35	American	Pacific Steamship Co. (S. B.)	344.9	50.2	24.0	Portland	Belfast	Wheat	5,058	4,358	3,073
Eastern Guide	25	0.05	28	6.36	28	14.05	29	5.50	American	Sefton Steamship Co	400.3	52.3	24.6	San Francisco	Genoa	Wheat, general	7,138	5,783	3,990
Mount Berwyn	27	20.30	28	7.54	28	15.40	29	5.15	British	F. A. Hunseker	....	....	....	Balboa	Cristobal		....	....	....
Secret [6]	....	....	28	10.00	28	....	....	....	....		....	....	....				....	....	....

[6] Launch. [7] Yacht. [8] Wheat, flour, and general. [9] Coffee, sugar, and general.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 22	Tamar	Royal Mail Steam Packet Co	London via wayports.	May 23	St. Mihiel [11]	United States Army	New York.
May 24	Toloa	United Fruit Co	New York via wayports.	May 23	Sacramento [10]	United States Navy	High seas.
May 26	Sacramento [10]	United States Navy	High seas.	May 24	Linda S. [12]	Surgeon Brothers	Bocas del Toro.
May 28	Solana	Pacific Mail Steamship Co	Tampico.	May 24	Caribbean	Panama Railroad Cattle Industry	Cartagena.
....	....	....	....	May 25	Toloa	United Fruit Co	New York via wayports.

[10] Gunboat. [11] Transport. [12] Motor schooner.

PORT OF BALBOA.

May 22	Cleveland [13]	United States Navy	San Francisco.	....	....	....	....
May 22	Anyo Maru	Toyo Kisen Kaisha	Hongkong.	....	....	....	....

[13] Cruiser.

*Other than ships passing through the Canal.

Notice to Mariners.—Obstructions to Navigation.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 26, 1921.

CIRCULAR No. 643-86:

The following obstructions to navigation have been reported by radio:

(*a*) On May 19, 1921 (6.15 p. m.), the Commanding Officer of the U. S. S. *O–12* reports having passed, while in latitude 6° 3′ North, longitude 79° 24′ 20″ West, a large log 40 feet long, 4 feet in diameter and with projecting roots, dangerous to navigation.

(*b*) On May 25, 1921 (11.20 a. m.), the master of the steamship *Depere* reports having passed, while in latitude 4° 4′ North, longitude 78° 45′ West, 3 trees about 50 feet long with roots and branches interwoven, dangerous to navigation.

JAY J. MORROW,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending May 28, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged	Cargo— Laded.
				Tons.	*Tons.*
Ottar	Caribbean Steamship Line	May 22	May 23	48	(2)
Urubamba	Peruvian Steamship Line	May 22		1,938	
Laura C. Hall	Pacific Metals Corporation	May 22		64	
Tamar	Pacific Steam Navigation Co	May 22		875	
Ebro	Pacific Steam Navigation Co	May 23	May 24	(1)	2
Caribbean	Panama Railroad Cattle Industry		May 24		20
Ulysses	Royal Netherlands W. I. Mail		May 24		16
Jamaica	Pacific Steam Navigation Co	May 23	May 26	2	61
Toloa	United Fruit Co	May 24	May 25	452	218
Cauca	Pacific Steam Navigation Co	May 24	May 26	1,318	(2)
Honduras	French Line	May 25	May 26	92	(2)
Quilpue	Pacific Steam Navigation Co	May 25	May 27	773	1,025
Balboa	Colombian Maritime Co	May 26		580	
Quillota	Pacific Steam Navigation Co	May 27		158	
Manavi	Pacific Steam Navigation Co		May 28		164
Oriana	Pacific Steam Navigation Co	May 28		76	
Solana	Pacific Mail Steamship Co	May 28		10,000	

[1] No cargo discharged. [2] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending May 30, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged.	Cargo— Laded.
				Tons.	*Tons.*
Anyo Maru	Toyo Kisen Kaisha	May 22		1,236	
Mevania	United States Shipping Board	May 22	May 25	9,000	
West Haven	Atlantic Gulf Steamship Corp	May 23	May 23	25	
Quilpue	Pacific Steam Navigation Co	May 25	May 25	20	
Jamaica	Pacific Steam Navigation Co	May 26	May 26		23
Manavi	Pacific Steam Navigation Co	May 28	May 28		3

Regulating Water in Gatun Lake.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 24, 1921.

All concerned—The following schedule for maintaining Gatun Lake during the 1921 rainy season will be adhered to as closely as conditions permit.

The lake will be allowed to fill to elevation plus 85.5 feet before any water is wasted over the spillway. This elevation should be reached by the latter part of June.

The lake will be held between elevations plus 85.5 feet and plus 86 feet until the 1st of October; filled to elevation plus 86.5 feet in October; and the filling will be completed to elevation plus 87 feet in November.

The allowable variation in lake level will be 0.5 foot to lessen the number of spillway gates operated simultaneously in regulating the lake level.

C. S. RIDLEY,
Assistant Engineer of Maintenance.

Fourth of July Celebration.

Committees have been appointed from among employees residing at the Pacific entrance of the Canal to make arrangements for the holding of a "community celebration" at Balboa, C. Z., on July 4, 1921.

Subscription lists are being circulated to raise funds for defraying the expenses of such a celebration. The amusements being provided for, include, among other things, aquatics, fireworks, dancing, children's exercises, drills by Army and Navy, pistol and rifle shooting, tennis, and athletic contests of all kinds.

The Panama Railroad is arranging for a $1 round-trip excursion rate for employees and their families attending the celebration, and for free transportation to soldiers and sailors in uniform.

The Fourth of July celebration on the Atlantic side will be confined to exercises of a patriotic character and entertainment features for the children, and will, it is understood, occupy only the afternoon of that day. It will be held either at Coco Solo or Pier 6, Cristobal.

Official Circulars.

Charges for Chagres River Sand and Gravel.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 20, 1921.

CIRCULAR No. 711-5 (superseding Circular No. 711-4):

Effective June 1, 1921, sand and gravel will be furnished at the following rates:

SAND, NO. 2 GRAVEL, OR RUN-OF-BANK GRAVEL.

1. To departments and divisions of The Panama Canal and Panama Railroad:

	F. O. B. cars Gamboa. *Per cu. yd.*
In lots of 3,000 cubic yards, or more, per month	$1.60
In lots of 500 cubic yards, or more, per month	1.70
In lots of less than 500 cubic yards, per month	1.80

Amounts per month to be the aggregate of sand and gravel delivered.

2. To the U. S. Army and Navy and other departments of the Government:

	F. O. B. cars Gamboa. *Per cu. yd.*
In carload lots, 500 cubic yards or more, per month	$1.80
In carload lots, less than 500 cubic yards, per month	1.90

	Delivered at any point on P. R. R. *Per cu. yd.*
In carload lots, 500 cubic yards or more, per month	$2.80
In carload lots, less than 500 cubic yards, per month	2.90

3. To individuals and companies:

	Per cu. yd.
In carload lots delivered at any point on the Panama Railroad	$2.90

4. No. 1 gravel will be furnished to departments and divisions of The Panama Canal and Panama Railroad at 25 cents per cubic yard, plus actual cost of loading and transportation.

JAY J. MORROW,
Governor.

Pay Car Schedule.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 20, 1921.

The following approximate schedule for the pay car for all Panama Canal and Panama Railroad employees will be followed as closely as possible beginning with the payment for the month of June, 1921:

FROM BALBOA HEIGHTS.

9th. Leave:	
Balboa station	6.45 a. m.
Miraflores Locks	7.00 to 7.20
Pedro Miguel	7.30 to 7.55
Paraiso	8.00 to 8.20
Red Tank	8.30 to 8.45
Corozal	8.50 to 9.00
Material yard, Balboa	9.10 to 9.20
Balboa shops	9.25 to 10.10
Roundhouse	10.15 to 10.20
Foundry	10.25 to 10.35
Balboa commissary	10.40 to 10.50
District Quartermaster, Balboa	11.00 to 11.10
Ancon hotel	11.15 to 12.30
Panama yard	12.35 to 12.45
Quarantine station	1.15 to 1.20
Balboa hotel	1.25 to 1.40
La Boca Road	1.45 to 1.55
Arrive Balboa	2.10 p. m.
10th. Leave:	
Balboa station	6.45 a. m.
Main Line, Pedro Miguel to Gatun	7.00 to 8.30
Fort Davis railroad station	8.35 to 8.40
Cold storage plant, Mount Hope	9.05 to 9.20
Printing plant	9.30 to 9.35
Cristobal shops	9.40 to 10.00
Coaling plant	10.05 to 10.30
Laundry, etc	10.40 to 11.05
Washington hotel	11.15 to 11.25
P. R. R. Station, Colon	11.30 to 11.35
Cristobal commissary	11.40 to 11.50
Siding back of commissary	11.55 to 1.10
Gatun Locks	1.20 to 1.30
Arrive Balboa	2.45 p. m.

All outside payments not scheduled above will be made on such dates as best suit all concerned. These dates are agreed upon as early as possible each month.

R. W. GLAW,
Paymaster, The Panama Canal.

Approved:
JAY J. MORROW,
Governor.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 25, 1921.

CIRCULAR No. 295:

Effective May 11, 1921, Mr. W. T. Grunewald is designated an accountable official of The Panama Canal, *vice* Mr. Andrew Johnston, and as such will account for all nonexpendable property in use by the Washington Hotel.

ELWYN GREENE,
Acting Auditor, The Panama Canal.

Approved:
JAY J. MORROW,
Governor.

Colon Evening Passenger Train Service, Except Saturday and Sunday, Discontinued.

PANAMA RAILROAD COMPANY,
OFFICE OF MASTER OF TRANSPORTATION,
BALBOA HEIGHTS, C. Z., May 19, 1921.

To all concerned—Effective Wednesday, June 1, train No. 101, leaving Colon at 11.15 p. m., daily except Saturdays, will be discontinued.

On and after that date there will be no evening passenger service on the main line out of Colon after the departure of train No. 7 at 5 p. m., except train No. 9, leaving at 11.30 p. m., Saturdays, and train No. 11, leaving Colon at 9.30 p. m., Sundays.

W. J. BISSELL,
Acting Master of Transportation.

Approved:
S. W. HEALD,
Superintendent.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., May 28, 1921.

Insufficiently addressed mail matter for the following has been received in the office of the Director of Posts, and may be obtained upon the request of the addressees. Requests for forwarding may be made by telephone, calling Balboa 182:

Aralucca, Sra. Concepcion
Austin, D.
Beach, John H.
Biggam, Miss Jessie, Box 1045.
Blackett, D.
Britt, Charles
Bush, Hubert J.
Browne, Miss Grace[1]
Cooper, H. J., Box 100.
Crems, Margin
Dodge, Theodore J.
Gainer, Tellis
Gessner, Mrs. F. E.
Gildart, Mrs. Beatrice
Gordon, Phillip N.
Haywood, Thomas J., Box 578.
Hunter, C. D.
Jalovitzky, Alexander
King, J. E., Box 997.
Lewis, Thomas
Leve, Mrs. Mabel
Little, Less
McCallister, J. M., Box 862.
McKelverg, Mrs. E.
Malivida, Mrs. M., Box 103.
Miller, Ruth B.
Mudgett, Miss Georgia
Palmer, Alvin R., Box 57.
Pharis, E. S.
Reed, Edw. L.
Reynolds, John
Rupert, Mrs. M. B., c/o T. E. Henry.
Simar, J.
Sundberg, Bror.

[1] Special delivery.

Shipping Commissioner's Sale.

The Shipping Commissioner, room 305, Administration Building, Balboa Heights, C. Z., will accept written bids up to noon Tuesday, June 7, 1921, for the purchase of the personal effects belonging to the estates of Wong Tim and George Hoy, deceased American seamen. Bids may be made for the entire lot of the effects of each decedent, or be limited to individual articles. Prospective bidders desiring to examine the effects should apply to the Shipping Commissioner's office on any business day. Bids should be submitted in sealed envelopes, addressed to the undersigned, marked "Bid on effects of (insert name of seaman), deceased." No advance deposit of money is required, and the right is reserved to reject any or all bids.

C. H. CALHOUN,
Shipping Commissioner.

Sale of Typewriters.

The Panama Canal has for sale a number of used Underwood typewriters at reasonable prices. Some of these machines are at Balboa storehouse and others at Cristobal storehouse, where they may be inspected and purchased direct.

Eggs for Setting.

For a limited period only purchases of eggs for setting may be made at the Summit poultry farm at the following prices:

White Leghorn or Rhode Island Red, per setting of 15 eggs, $3; two settings, or 30 eggs, $5.50.

All sales f. o. b. Summit.

Sale of Laying Mash.

The Summit Poultry Farm has on hand about 6,000 pounds of laying mash, in excess of the amount required, which is offered for sale at $7.42 per cwt. f. o. b. Summit poultry farm. Orders should be placed on the Superintendent of the Cattle Industry Division, Cristobal.

Empty Barrels and Packing Cases for Sale.

Address inquiries to Chief Quartermaster. The Panama Canal, Balboa Heights, C. Z.

Sale of Lumber.

The Panama Canal has on hand at Balboa storehouse considerable quantities of 1″ x 6″, 1″ x 8″, and 1″ x 10″ dressed lumber, Douglas fir, grade 1, select common. Further information will be furnished by General Storekeeper, Balboa, or at office of Chief Quartermaster, Balboa Heights.

Postal Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

Taboga Launch Schedule Effective May 1, 1921.

	A. M.
From dock No. 19, Balboa every day, including Sundays and holidays...	10.30
	P. M.
Saturdays and days preceding holidays	5.00
From Taboga:	P. M.
Week days	12.30
Sundays and holidays	6.30

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Volume XIV. Balboa Heights, C. Z., June 8, 1921. No. 43.

Changes to Tariff No. 4—Coal.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., June 1, 1921.

To all concerned—The following changes are made to Tariff No. 4, Schedule of Rates for Supplies and Services furnished to Shipping and Allied Interests at the Panama Canal:

Item 21—COAL.
Effective June 15, 1921.

	Cristobal-Colon.	Balboa.
1. For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 2	$14.00	$16.00
2. For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting transit		14.00
3. For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds	15.00	17.00
4. For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 3, per ton of 2,240 pounds	16.00	18.00
5. When request is made by commander of vessel, chief engineer, or agent, for trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, an additional charge of 90 cents per ton will be made for extra handling.		
6. For lump coal for galley use, delivered in sacks, additional charge per ton, $10. Should the vessel furnish satisfactory sacks, the price will be only $3 per ton additional. Not more than 5 tons will be supplied to a vessel.		
7. For coal for cargo, delivered only by special authority of the Governor, per ton of 2,240 pounds	14.00	16.00

JAY J. MORROW,
Governor, The Panama Canal.
President, Panama Railroad Company.

NOTE—The above changes will be included in Supplement No. 4 to Tariff No. 4, when this supplement is issued.

Fuel Oil.

The situation with regard to fuel oil is now in such shape as to permit the oiling of vessels without restriction. Vessels are encouraged to bunker for the round trip in all cases where it would assist them in their operations, Effective June 1, 1921, the third shift of the oil-handling plants was taken off, and the first and second shifts will operate the plant for any oil handled after 11 p. m. Ships taking oil for bunkers will be charged 10 cents per barrel for pumping any oil between 11

p. m. and 7 a. m. Oil companies discharging oil into storage tanks will be billed $4.70 per hour for each hour's pumping service rendered between the hours of 11 p. m. and 7 a. m.

The Panama Canal is now offering fuel oil at Cristobal and Balboa at $2.75 per barrel of 42 gallons. The West India Oil Company, the Texas Oil Company, and the Panama Agencies Company, are now offering fuel oil at Cristobal at $2.10 a barrel. The Union Oil Company, the West India Oil Company, and the Panama Agencies Company are offering oil at Balboa for $2.10 a barrel. The Panama Canal Storage Corporation has tanks at Cristobal and at Balboa, and the Huasteca Petroleum Corporation has tanks at Cristobal. These companies have not published their prices.

The Panama Canal is not now in a position to supply Diesel oil. The West India Oil Company, the Union Oil Company, and the Panama Agencies Company are offering Diesel oil at Balboa at $3.50 a barrel.

Canal Traffic in May.

Traffic through the Canal during the month of May was the lightest since June of last year. Commercial ships transiting the Canal numbered 210, an average of 6.8 per day. In cargo tons, the May traffic was the lowest since February, 1920.

The traffic for the month, by trade routes, was distributed as follows:

ATLANTIC TO PACIFIC.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
United States coastwise:							*Long tons.*
United States	19	67,707	82,257	103,013	67,872	$84,545.85	90,617
From East Coast of United States to Far East:							
Japanese	7	28,263	32,938	43,723	27,612	35,162.50	23,596
British	4	16,698	19,902	26,013	16,454	20,872.50	28,636
United States	4	15,087	19,388	22,905	14,780	18,858.75	28,676
Norwegian	1	3,053	3,886	4,894	3,054	3,816.25	1,629
Totals	16	63,101	76,114	97,535	61,900	78,710.00	82,537
From East Coast of United States to West Coast of South America:							
United States	5	13,215	16,785	21,986	13,386	16,515.05	13,629
British	4	9,712	13,661	18,185	10,357	12,140.00	5,228
Peruvian	1	4,337	5,219	6,848	4,337	5,421.25	7,037
Norwegian	1	969	1,222	1,585	972	1,211.25	48
Totals	11	28,233	36,887	48,604	29,052	35,287.55	25,942
From Europe to West Coast of South America:							
British	4	14,119	18,346	23,126	14,010	17,648.75	9,764
Italian	2	6,410	7,886	11,226	6,728	8,012.50	3,614
French	1	4,326	4,363	5,923	3,763	5,235.60	468
Dutch	1	1,603	3,057	2,655	1,625	2,003.75	2,690
German	1	1,225	1,320	1,928	1,136	1,531.25	711
Totals	9	27,683	34,972	44,858	27,262	34,431.85	17,247
From Cristobal to West Coast of South America:							
British	5	3,978	7,071	8,874	4,828	4,947.18	1,181
Peruvian	2	2,495	5,356	8,049	4,187	3,118.75	565
Chile	1	1,463	2,577	2,553	1,600	1,828.75	452
United States	1	336	350	615	372	420.00	104
Totals	9	8,272	15,354	20,091	10,987	10,314.68	2,302
From British Isles to Australasia:							
British	7	40,245	47,451	57,281	36,163	49,944.35	23,101
From United States to Australasia:							
British	3	13,444	16,073	21,612	13,540	16,805.00	12,907
United States	2	7,045	9,387	11,438	7,050	8,806.25	13,081
Swedish	1	2,688	3,900	4,354	3,366	3,360.00	5,500
Totals	6	23,177	29,360	37,404	23,956	28,971.25	31,488

ATLANTIC TO PACIFIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From Europe to West Coast of United States:							*Long tons.*
Dutch	1	5,403	6,612	8,384	5,437	$4,760.64	.....
Swedish	1	3,411	5,661	5,642	4,320	4,263.75	1,067
Danish	1	3,244	4,016	5,219	3,337	4,055.00	2,955
British	1	2,846	3,697	4,574	2,861	3,557.50	3,500
Totals	4	14,904	19,986	23,819	15,955	16,636.89	7,522
From Mexico to West Coast of United States:							
United States	3	14,057	16,195	22,045	13,727	17,571.25	32,129
Norwegian	1	4,407	5,051	7,022	4,438	5,508.75	9,700
Totals	4	18,464	21,246	29,067	18,165	23,080.00	41,829
From Mexico to West Coast of South America:							
Norwegian	2	8,861	10,148	13,948	8,840	11,076.25	18,612
United States	1	4,383	5,160	7,058	4,327	5,478.75	10,400
Totals	3	13,244	15,308	21,006	13,167	16,555.00	29,012
From Cristobal to Central America:							
British	4	3,247	3,656	5,585	3,239	3,274.37	672
From Mexico to Far East:							
Japanese	1	5,513	6,385	9,049	6,502	6,891.25	7,879
From Canada to Australasia:							
British	1	5,150	5,771	8,031	5,166	6,437.50	6,396
From United States to West Coast of Canada:							
British	1	4,889	7,133	7,548	4,848	6,111.25	4,400
From Mexico to Balboa:							
United States	1	4,527	5,212	7,312	4,526	5,658.75	9,000
From Europe to West Coast of Canada:							
British	1	4,485	4,995	5,697	3,525	3,596.40	.....
From Cristobal to West Coast of United States:							
United States	1	1,323	1,602	2,136	1,319	1,653.75	561
Colombian coastwise:							
British	1	614	622	1,138	602	746.40	818
Local—Cristobal to Balboa:							
United States	1	116	118	234	116	87.00	.....
Grand totals	100	334,894	414,429	529,408	334,322	412,934.09	381,323
April, 1921	118	397,568	492,506	615,818	391,141	490,505.91	500,801
May, 1920	105	314,728	388,990	490,765	315,284	382,267.59	418,678

PACIFIC TO ATLANTIC.

United States coastwise:							
United States	16	58,274	75,593	90,449	57,184	$72,813.55	93,242
From West Coast of South America to East Coast of United States:							
United States	9	22,165	28,087	35,036	22,363	27,544.45	35,585
Norwegian	4	6,230	7,236	8,962	5,648	7,678.55	8,028
British	3	4,851	7,550	9,704	5,229	6,063.75	6,984
Totals	16	33,246	42,873	53,702	33,240	41,286.75	50,597
From West Coast of United States to Europe:							
United States	11	43,370	53,976	65,501	43,332	54,212.50	78,747
Danish	2	8,058	10,006	12,716	8,053	10,072.50	17,598
Dutch	1	6,852	6,961	9,065	6,871	8,491.20	9,409
British	1	3,210	3,990	5,241	3,220	4,012.50	7,138
Totals	15	61,490	74,933	92,523	61,476	76,788.70	112,892
From Australasia to Europe:							
British	10	58,196	76,211	89,132	56,313	72,745.00	51,163
From West Coast of South America to Europe:							
British	7	24,338	30,120	39,306	24,669	30,422.50	34,265
French	2	7,166	8,227	11,446	7,281	8,957.50	10,303
Danish	1	2,771	3,484	4,358	2,771	3,463.75	4,978
Totals	10	34,275	41,831	55,110	34,721	42,843.75	49,546
From West Coast of South America to Cristobal:							
British	6	3,626	5,157	7,203	4,048	4,511.40	1,444
Chilean	2	3,274	5,759	6,351	3,872	4,092.50	1,557
Peruvian	2	2,495	5,356	8,049	4,187	3,118.75	4,293
Totals	10	9,395	16,272	21,603	12,107	11,722.65	7,294

PACIFIC TO ATLANTIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From West Coast of South America to Mexico:							*Long tons.*
Norwegian	3	13,268	15,199	20,970	13,278	$10,943.28	.....
United States	2	7,925	9,387	12,281	7,582	6,758.64	.....
Japanese	1	5,513	6,385	9,049	6,502	4,597.20	.....
British	1	4,645	5,311	7,270	4,513	3,823.92	.....
Totals	7	31,351	36,282	49,570	31,875	26,123.04	.....
From Central America to Cristobal:							
British	4	2,994	3,325	5,265	2,999	3,742.50	4,244
United States	1	336	350	615	372	420.00	580
Totals	5	3,330	3,675	5,880	3,371	4,162.50	4,824
From West Coast of United States to East Coast of Mexico:							
United States	3	14,784	16,097	21,825	14,432	11,771.19	.....
British	1	3,260	3,697	5,316	3,354	2,661.84	.....
Totals	4	18,044	19,794	27,141	17,786	14,433.03	.....
From Far East to East Coast of United States:							
Japanese	1	4,921	5,629	7,770	4,821	6,151.25	4,035
British	1	3,695	3,991	4,329	2,798	4,618.75	4,794
United States	1	2,412	2,787	3,978	2,524	3,015.00	1,054
Totals	3	11,028	12,407	16,077	10,143	13,785.00	9,883
From West Coast of Canada to East Coast of Mexico:							
British	1	5,166	6,096	6,084	5,166	4,389.12	.....
United States	1	4,398	6,321	7,129	4,267	4,551.12	.....
Totals	2	9,564	12,417	13,213	9,433	8,940.24	.....
From West Coast of Canada to Europe:							
British	2	7,249	8,573	10,591	6,767	9,061.25	15,165
From West Coast of Canada to Egypt:							
British	2	7,126	8,176	10,935	6,743	8,907.50	8,417
From Balboa to Tampico:							
United States	1	4,527	5,212	7,312	4,526	3,752.64	.....
From West Coast of Canada to United States:							
United States	1	4,219	5,020	5,655	4,022	5,273.75	3,775
From Australasia to United States:							
United States	1	3,636	4,875	5,869	3,635	4,545.00	370
From West Coast of United States to Cuba:							
United States	1	1,862	2,206	3,169	1,862	2,327.50	2,460
Local—Balboa to Cristobal:							
United States	2	1,695	2,064	2,914	1,731	1,654.08	269
From West Coast of United States to Cristobal:							
United States	1	1,323	1,602	2,136	1,319	1,653.75	1,515
From Society Islands to United States:							
United States	1	172	172	213	171	129.00	.....
Grand totals	110	360,002	450,188	563,194	358,425	422,948.68	411,412
April, 1921	109	373,548	462,997	587,269	366,435	437,471.18	406,812
May, 1920	119	379,867	463,435	590,697	379,657	452,161.05	556,241

Cash Balance in Appropriations—April, 1921.

The following is a report of the Governor to the Secretary of War, of the cash balance available in The Panama Canal appropriations in April.

BALBOA HEIGHTS, C. Z., May 28, 1921.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: Herewith is a report showing the commissary sales, financial receipts and

expenditures, and of the cash balance available in The Panama Canal appropriations, as compared with the preceding month:

	April, 1921.	March, 1921.
Cash balance available for expenditure:		
In Canal appropriations	[1] $8,020,685.58	[2] $11,058,468.77
In Fortification funds allotted to The Panama Canal	[1] 473,781.75	[2] 473,781.75
Payments made from appropriations:		
By the Paymaster on Isthmus	1,570,092.07	1,542,364.57
By the Disbursing Clerk, Washington	737,709.52	1,206,502.77
By the Panama Railroad Company for commissary books	307,802.49	310,483.20
Classification of collections on the Isthmus:		
Repaid to appropriations	1,031,281.31	861,894.93
Commissary and other trust funds	309,877.44	312,700.40
Tolls	928,007.79	1,105,566.19
Sales of water	14,430.50	3,335.85
Postal receipts	10,617.87	12,052.72
Licenses, taxes, court fees, fines, etc	4,381.83	3,564.70
Total collections on Isthmus	2,298,596.74	2,301,026.58
Collections by the Disbursing Clerk, Washington	127,292.71	112,209.56
Deposits with the Assistant Treasurer, United States	49,700.00	59,485.94
Canal Zone and miscellaneous funds:		
Receipts	207,781.18	298,629.98
Disbursements	263,446.81	72,797.26
Payrolls on the Isthmus	1,206,223.67	1,296,971.01
Requisitions for purchases in the United States	238,996.12	514,743.10
Sales of commissary supplies:		
To steamships, other than U. S. Government and of the Panama Railroad Steamship Line	53,432.69	65,856.83
To The Panama Canal	127,727.43	138,042.24
To the Panama Railroad, including steamships and the Hotel Washington	20,056.27	25,532.93
To the U. S. Government, including Army and Navy	134,007.10	133,333.68
To individuals and companies through charge accounts	26,036.10	25,281.84
To individuals purchasing coupons	484,426.83	504,908.51
Total commissary sales	845,686.42	892,956.03

[1] On April 30, 1921. [2] On March 31, 1921.

Respectfully,

JAY J. MORROW,
Governor.

Changes to Tariff No. 4—Fuel and Diesel Oils.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., May 27, 1921.

To all concerned—The following change is made to Tariff No. 4, Schedule of Rates for Supplies and Services furnished to Shipping and Allied Interests at the Panama Canal:

Item 22.—FUEL AND DIESEL OILS.

Effective June 1, 1921.

3. Pumping oil into and out of private tanks, 4 cents per barrel, each way, excepting, that between the hours of 11 p. m. and 7 a. m., an additional charge of $4.70 per hour, will be made for pumping cargoes from ships into storage tanks, and 10 cents per barrel from storage tanks into ships. Oil having a viscosity in excess of 225 Engler degrees at 86° F. will not be handled by Panama Canal oil plants and permission for storage thereof will not be granted.

JAY J. MORROW,
Governor, The Panama Canal.
President, Panama Railroad Company.

NOTE—The above change will be included in Supplement No. 4 to Tariff No. 4, when this supplement is issued.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone, or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight June 4, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
San Joaquin	28	14.22	29	6.10	29	14.12	30	10.01	Norwegian	W. Wilhelmsen	425.0	57.0	26.6	Tuxpan	Antofagasta	Crude oil	9,412	7,059	5,043
Urubamba	22	16.18	29	6.24	29	13.05	29	20.10	Peruvian	Peruvian Steamship Line	381.2	41.0	18.8	Cristobal	Callao	General	106	4,803	2,951
Floridian	28	15.40	29	7.00	29	14.54	29	15.55	American	American-Hawaiian Line	415.0	54.0	21.0	New York	Los Angeles	General	3,000	7,245	5,152
Quillota	27	3.50	29	7.17	29	15.20	29	16.20	British	Pacific Steam Navigation Co.	361.4	46.2	18.4	New York	Guayaquil	General	260	4,768	2,956
Robin Goodfellow	28	5.59	29	8.53	29	16.02	30	11.12	American	Robin Steamship Line	424.8	55.2	27.6	New York	Seattle	General	10,075	7,473	5,624
Brush	29	12.25	29	13.00	29	19.39	29	20.30	American	North Atl. & Western S. S. Co.	390.0	54.2	19.6	Philadelphia	Seattle	General	2,700	6,161	4,433
S. C. 284			29	8.45	29	15.38			American	United States Navy				Cristobal	Balboa				
Oriana	28	19.04	30	6.08	30	12.27	30	14.45	British	Pacific Steam Navigation Co.	465.0	56.0	22.6	Liverpool	Coronel	General	2,697	8,620	5,345
Pyro [1]	27	17.28	30	6.15	30	15.00	30	16.05	American	United States Navy	483.0	61.0	26.6	Hampton Rds.	San Diego	Naval stores	3,828		
Alaska Maru	30	5.54	30	7.05	30	14.45	30	15.45	Japanese	Osaka Shosen Kaisha	420.0	56.1	18.0	New York	Yokohama	(5)	814	7,460	5,307
Balboa	26	15.00	30	11.12	30	18.27	31	13.00	American	Colombian Maritime Co.	190.0	29.1	11.0	Cristobal	Guayaquil	General	104	741	350
Charles H. Cramp	30	12.52	30	13.07	30	19.30	30	20.35	American	Atl. Gulf & Pacific S. S. Co. (S. B.)	420.0	53.9	23.6	New York	San Francisco	General	4,900	6,755	4,750
Maricopa	30	17.00	31	6.17	31	14.30	31	15.55	Norwegian	W. Wilhelmsen	430.0	57.0	27.0	Tampico	Tocopilla	Crude oil	9,200	7,000	5,105
Dolphin [2]	31	6.22	31	6.45	31	13.06			American	United States Navy	256.0	33.0	17.0	Port Limon	Balboa				
Kai Ora	31	12.20	31	6.55	31	14.55	31	15.59	British	Shaw, Saville & Albion Co.	447.0	56.0	30.0	Montreal	Auckland	General, coal	6,396	8,237	5,771
Munaires	6-1	1.55	6-1	6.35	6-1	13.25	6-1	19.05	American	Munson Steamship Line	370.0	53.0	25.6	New York	Tiburon	Coal	7,226	5,577	4,225
Keiyo Maru	6-1	9.25	1	9.55	1	16.56	2	17.00	Japanese	Toyo Kisen Kaisha	400.0	53.0	21.0	New York	Yokohama	General	4,002	6,163	4,376
Canadian Voyager	6-1	6.25	1	11.52	1	19.46	1	21.12	British	Canadian Government	320.0	44.0	21.1	Sabine	Vancouver	Sulphur	3,750	3,162	2,042
Conroy [3]			1	6.00	1	8.26			American	United States Army				Cristobal	Gatun Lake				
Breckenridge [3]			1	6.00	1	8.26			American	United States Army				Cristobal	Gatun Lake				
Huasco	29	17.24	2	6.10	2	13.19	2	14.55	Chilean	South American Steamship line	378.0	44.0	23.6	Cristobal	Valparaiso	General	393	4,552	3,182
Chiquimula [4]	6-1	11.21	2	6.26	2	13.59	2	15.28	American	Chiquimula Steamship Co.	176.0	36.0	14.6	Baltimore	La Union	Steel	693	716	530
Taiho Maru	31	13.45	2	7.18	2	15.01	2	16.10	Japanese	Kokusai Kisen Kaisha	407.0	50.0	26.6	Galveston	Kobe	General	7,000	6,199	4,524
West Cayote	6-1	22.15	2	7.45	2	15.46	2	22.12	American	Williams, Dimond & Co. (S. B.)	427.0	54.0	19.0	Liverpool	San Francisco	General	2,398	6,567	4,899
Hamburg Maru	6-2	8.00	2	8.50	2	17.35	2	20.10	Japanese	Osaka Shosen Kaisha	400.0	54.0	19.7	Galveston	Yokohama	General	3,269	5,765	4,043
Transvaal	6-1	20.30	2	12.06	2	19.03	2	20.10	Danish	Dmpsk. Aktics Orient	360.0	51.0	19.6	Copenhagen	San Francisco	General	3,850	4,853	3,476
Panama Maru	6-2	18.01	3	6.25	3	14.00	3	16.25	Japanese	Osaka Shosen Kaisha	400.0	51.8	22.8	Buenos Aires	Kobe	General	2,380	6,099	4,289
Armagh	6-3	11.15	3	11.30	3	18.08	3	19.08	British	Union Shipping Co. of N. Z.	530.5	63.5	30.8	New York	Auckland	General, case oil	10,693	12,857	8,669
Wabble [3]	6-3		3	8.30	3	13.15			American	B. Rojas	28.4	7.7	3.0	Cristobal	Gatun	Ballast		3	3
Clemence C. Morse	6-4	6.35	4	7.20	4	15.27	4	16.40	American	N. Atl. & Western S. S. Co. (S.B.)	402.0	53.0	23.6	Mobile	Los Anglees	General	6,500		
Putnam [3]			4	6.00	4	11.38			American	United States Army				Cristobal	Gamboa				

[1] Supply ship. [2] Gunboat. [3] Launch. [4] Motor schooner. [5] Steel, machinery, and general.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Apus	29	8.30	29	9.35	29	16.31	30	1.05	American	E. C. Evans & Sons (S. B.)	401.4	52.3	25.6	Portland	Cork	General	7,275	7,082	5,167
Huasco	29	9.25	29	10.32	29	17.24	2	6.10	Chilean	South American Steamship Co.	379.7	44.3	19.0	Valparaiso	Cristobal	General	300	4,552	3,182
Pennsylvania	29	9.00	29	11.30	29	18.18	29	18.18	American	United American Line	407.7	53.7	27.9	Honolulu	New Orleans	Sugar	9,000	7,107	4,953
Santa Luisa	29	19.15	30	8.06	30	14.23	30	15.25	American	W. R. Grace & Co.	360.2	51.6	21.9	Valparaiso	New York	General	2,232	5,694	3,975
Saint Jean	30	7.45	30	8.49	30	16.10	2	16.15	French	French Line	397.0	50.1	23.0	Talcahuano	Bordeaux	General	4,000	5,849	4,081
Salvador	30	14.45	31	6.40	31	13.11	....	.....	British	Pacific Steam Navigation Co.	215.0	33.0	16.8	Champerico	Cristobal	(6)	1,013	1,213	692
Acajutla	31	4.00	31	7.40	31	14.17	....	.....	British	Pacific Steam Navigation Co.	215.7	33.5	15.0	Guayaquil	Cristobal	(7)	725	1,273	706
Calgarolite	31	13.30	31	14.10	31	21.15	1	4.25	British	Imperial Oil Co.	463.2	60.2	18.6	Vancouver	Tampico	Ballast	.....	8,491	6,096
Huallaga	31	18.05	1	6.50	1	14.15	....	.....	Peruvian	Peruvian Steamship Line	360.0	44.7	19.0	Ilo	Cristobal	General	1,164	4,514	2,386
Celebes Maru	31	19.00	1	7.35	1	15.24	2	6.02	Japanese	Osaka Shosen Kaisha	385.0	51.0	17.6	Calcutta	New Orleans	General	558	6,014	4,406
General H. F. Hodges	6–2	5.00	2	7.48	2	15.19	....	.....	American	Panama Railroad Steamship Line	323.5	39.0	30.0	Guayaquil	Cristobal	General	2,821	3,013	1,574
Julia Luckenbach	6–2	14.45	3	6.28	3	13.50	3	13.50	American	Luckenbach Line	436.6	57.2	29.4	San Francisco	New York	Lumber, general	8,762	8,543	6,427
Tainui	6–2	17.20	3	6.39	3	14.59	3	18.59	British	Shaw, Saville & Albion Co.	477.8	61.0	25.0	Wellington	London	(8)	3,937	10,630	7,606
Mahana	6–3	6.15	3	8.59	3	16.35	3	18.18	British	Shaw, Saville & Albion Co.	500.9	63.3	24.2	Port Chalmers	London	(8)	4,365	12,151	8,627
Cauca	6–3	9.50	3	10.43	3	17.21	....	.....	British	Pacific Steam Navigation Co.	246.0	35.2	15.0	Corinto	Cristobal	Coffee, general	851	1,582	1,023
Henry S. Grove	6–4	5.30	4	8.05	4	14.58	4	15.30	American	Atl. Gulf & Pacific S. S. Co. (S. B.)	404.6	53.9	21.3	Tacoma	New York	General	3,133	6,755	4,688
Benledi	6–4	7.00	4	8.31	4	16.22	4	20.13	British	Ben Line Steamship Co. Ltd.	379.0	46.0	23.2	Portland	Dublin	Wheat, flour	5,320	4,158	3,035
Birmingham City	24	7.30	4	12.20	4	19.45	4	22.15	American	United States Steel Products Co.	395.5	55.0	26.6	Seattle	Baltimore	Lumber, general	6,400	6,841	4,686

6 Coffee, sugar, and general.

7 Cocoa, coffee, hides, etc.

8 Cold storage and general.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 29	San Gil	United Fruit Co.	Boston.	May 29	San Gil	United Fruit Co.	Boston.
May 29	San Pablo	United Fruit Co.	Boston.	May 29	San Pablo	United Fruit Co.	Port Limon.
May 29	Anna	P. Johannessen	New York.	May 30	Abangarez	United Fruit Co.	N. O. and wayports.
May 29	Harold Walker	Pan-American Petroleum Co.	Tampico.	May 30	Cricket	Cricket Steamship Co.	Puerto Colombia.
May 29	Abangarez	United Fruit Co.	New Orleans.	May 30	Anna	P. Johannessen	Cartagena.
May 29	Caribbean	Panama Railroad Cattle Industry.	Cartagena.	May 30	Actor	Harrison Line	Tampico.
May 29	Actor	Harrison Line	Liverpool.	May 30	Metapan	United Fruit Co.	N. O. and wayports.
May 30	Cricket	Cricket Steamship Co.	La Romana.	May 31	Harold Walker	Pan-American Petroleum Co.	Tampico.
May 30	Elm Leaf	Anglo-Saxon Petroleum Co.	New Orleans.	June 1	Caribbean	Panama Railroad Cattle Industry.	Cartagena.
May 30	Metapan	United Fruit Co.	New Orleans.	June 1	Parismina	United Fruit Co.	New Orleans and wayports.
May 31	Calamares	United Fruit Co.	New York via wayports.	June 1	Calamares	United Fruit Co.	New York via wayports.
May 31	Parismina	United Fruit Co.	Habana.				

(Continued on page 680, column 2.)

Notice to Mariners.—Obstruction to Navigation.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 1, 1921.

CIRCULAR No. 643-87:

The master of the steamship *Calgarolite* reports by radio having passed at 5 p. m., on May 29, while in latitude 8° 55′ north, longitude 85° 33′ west, a large tree awash, about 50 feet long, 4 feet in diameter and with the large end covered with marine growth, dangerous to navigation.

JAY J. MORROW,
Governor.

Shipments of Fresh Fruit from Washington to Europe.

The Seattle Chamber of Commerce reports that experimental shipments of fresh fruits in cold storage to the United Kingdom via the Panama Canal have proved so successful that plans are being made for additional tonnage. The current freight rate on apples from the northwestern apple-growing districts via Seattle and Panama is approximately 40 per cent lower than the combined rail and water rate via New York. The Holland-American Line has been a pioneer in the development of this new trade.

Centenary of Peruvian Independence.

The Republic of Peru will celebrate this year the one hundredth anniversary of its independence. The official observances will begin July 28 and will continue until September. In that period a number of important public projects will be dedicated, and statues of historical personages will be unveiled. An industrial and commercial exposition of foreign and Peruvian products will be held. Foreign countries will be represented by official delegates. To attract tourists steamship lines maintaining services between New York and Callao through the Panama Canal have announced reduced round-trip fares.

Fruit from Chile.

According to *The South Pacific Mail* of Valparaiso the first consignment of Chilian fruit was shipped through the Panama Canal to New York on the steamship *Essequibo* in April and found a ready market there. This is described as the first step in an enterprise that may develop into an important element of Chilian commerce and one which is not likely to be affected by external conditions to the same extent as are products of the pampas or the mines. A most important factor in the case is that the seasons in Chile alternate with those of California so that fruit from that country can be delivered in New York during the months when it is most in demand.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending June 4, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged.	Laded.
				Tons.	*Tons.*
Urubamba	Peruvian Steamship Line	May 29	May 29	.....	61
San Joaquin	W. Wilhelmsen	May 29	May 29	143	.....
Huasco	Chilean Steamship Line	May 29	May 29	110	.....
Salvador	Pacific Steam Navigation Co.	May 30	May 30	8	.....
Gen. H. F. Hodges	Panama Railroad Steamship Line	June 2	June 2	1	.....
Cauca	Pacific Steam Navigation Co.	June 3	June 3	7	.....

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending June 4, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged.	Cargo— Laded.
				Tons.	*Tons.*
Urubamba	Peruvian Steamship Line		May 29		145
San Gil	United Fruit Co	May 29	May 29	80	(2)
Actor	Harrison Line	May 29	May 30	253	152½
Anna	Caribbean Steamship Co	May 29	May 30	183	587
Abangarez	United Fruit Co	May 29	May 30	559	5½
Harold Walker	Pan American Pet. and Transp. Co.	May 29	May 31	10,000	(2)
Caribbean	Panama Railroad Cattle Industry	May 29	June 1	400	(2)
Elm Leaf	Anglo-Saxon Petroleum Co	May 30	June 1	7,213	(2)
Huasco	Chilean Steamship Line	May 29	June 2	410	393
Acajutla	Pacific Steam Navigation Co	May 31		725	
Salvador	Pacific Steam Navigation Co	May 31		1,012¾	
Calamares	United Fruit Co	May 31	June 1	425	131
Parismina	United Fruit Co	May 31	June 1	922	(2)
Saint Jean	French Line	May 30	June 2	(1)	1,192
Tivives	United Fruit Co	June 1	June 2	191	666
Heredia	United Fruit Co	June 1	June 2	(1)	149
Celebes Maru	Osaka Shosen Kaisha	June 1	June 2	113	(2)
Tranvaal	East Asiatic Steamship Co	June 1	June 2	242	(2)
Crijnssen	Royal Netherlands W. I. Mail	June 1	June 2	15	2,198
Huallago	Peruvian Steamship Line	June 1		1,164	
Puerto Rico	French Line	June 2	June 4	117	288
Carrillo	United Fruit Co	June 2	June 2	337	5
Colon	Panama Railroad Steamship Line	June 2		2,837	
Gen. H. F. Hodges	Panama Railroad Steamship Line	June 2		2,822	
Cauca	Pacific Steam Navigation Co	June 3		851	
Bologna	Italian Line	June 4		97	
Duendes	Pacific Steam Navigation Co	June 4		316	
Allianca	Panama Railroad Steamship Line	June 4		1,826	
San Pablo	United Fruit Co	June 4	June 4	21	(2)

[1] No cargo discharged. [2] No cargo laded.

Changes to Departmental Tariff A—Coal.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., June 1, 1921.

To all concerned—The following changes are made to Departmental Tariff "A"—Schedule of Rates for Supplies and Services furnished to Departments and Divisions of The Panama Canal, Panama Railroad, other departments of the United States Government, employees, and those entitled to employees' rates, except where otherwise specified:

Class III.—Materials and Supplies.

ITEM 3—COAL.

Effective April 1, 1921.

	Per ton of 2,240 pounds. Colon and Cristobal.	Balboa.	Panama and line points.
1. To Panama Canal and to Panama Railroad at coaling plants, without trimming	$11.50	$13.00	
2. To parties taking carload lots, including U. S. Army and Navy, but exclusive of coal belonging to Navy	13.50	15.00	$15.00
3. Coal belonging to the U. S. Navy will be delivered at the plant at which stored for	3.00	3.00	
4. To parties taking less than carload lots from plants, cars, or bins	14.50	16.00	16.00
5. To employees of The Panama Canal, Panama Railroad, United States Government, and those entitled to employees' rates, including Santo Tomas Hospital	13.50	15.00	15.00

JAY J. MORROW,
Governor, The Panama Canal.
President, Panama Railroad Company.

NOTE.—The above changes have been issued under Circular No. RA-712, dated March 21, 1921, and are now issued as an amendment to Departmental Tariff "A."

NOTE.—The above changes will be included in Supplement No. 3 to Departmental Tariff "A," when this supplement is issued.

Lumber Shipments from the Pacific Coast through the Panama Canal.

The following figures showing lumber shipments from British Columbia, Washington, and Oregon through the Panama Canal during the first quarter of 1920 and the first quarter of 1921 are abstracted from a tabulation compiled by the Secretary of the Pacific Lumber Inspection Bureau at Seattle.

Destination.	1920. (First quarter.)	1921. (First quarter.)
	Feet.	*Feet.*
Atlantic Coast	1,202,229	42,495,579
South America, East Coast	.....	628,924
United Kingdom and Continent	24,418,115	16,264,988
Total	25,620,344	59,389,491

In commenting on these figures the *West Coast Lumberman* states that if the water shipments continue in the same volume during the balance of the year new records will be established for delivery of northwest lumber on the Atlantic Coast via the Panama Canal.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended June 4:

Steamship *Eastern Guide*, adjusting main engine crosshead and guides; cleaning and refitting H. P. piston rod packing; rebabbitting and boring spare crosshead brasses; repairing air chamber to beam feed pump; grinding-in and assembling evaporator relief valve; repairing and refitting brackets to main feed line; adjusting steering engine, fan engine, and circulator bearings; tug *Gorgona*, removing old and installing new air pump; performing miscellaneous repairs to main engine; repairing refrigerating system, anchor windlass, sanitary pump, towing machine; repairing whistle, examining circulators, renewing studs for boiler manhole plate, and performing miscellaneous pipework; cementing up main deck in wake of steam and exhaust pipes to towing machines; renewing clips on ventilators, renewing various cover boards, facia, molding, etc., and renewing other miscellaneous woodwork; Spanish cruiser *España*, docking cleaning and painting bottom; repairing hull forward where damaged through grounding; miscellaneous minor repairs to hull and engineer's departments, consisting of repairs to drains and vent and sounding pipes in engine rooms; overhauling various pumps, renewing suction and discharge lines to circulators; repairing ash hoist trunk; renewing discharge pipes to ash ejectors; manufacturing evaporator coils; manufacturing one boat boom; repairing and reriveting torpedo net platform, and renewing miscellaneous eye pads and ringbolts on deck; examining rudder; overhauling sea valves and zincs on hull; steamship *Birmingham City*, renewing L. P. piston rod, piston, follower and packing rings, main engine; lining up L. P. engine; launch *Coco Solo*, renewing stem, repairing monkey rails and repairing copper sheathing; subchaser *No. 284*, lining up auxiliary engine and generator base; overhauling crew's pump toilet; launch *Taboga*, renewing exhaust pipe and fittings; renewing stem; recalking hull and renewing copper sheathing as necessary; renewing sections of plank amidships where broken; renewing approximately 50 per cent of garboard strakes, port and starboard; renewing upper and lower fenders, port and starboard; renewing wood decking, beams, and covering board; renewing monkey rail, and performing other hull repairs.

The following vessels were at the Cristobal shops for repairs during the week ended June 6:

Steamships *Gen. H. F. Hodges*, *Colon*, and *Allianca*, miscellaneous repairs and painting to engine, deck, and steward departments; *Cauca*, bore out water end of ballast pump, also steam end if necessary; make and install plunger for same; *Salvador*, dry dock, clean and paint bottom; pump oil out of tanks and steam; fit emergency pump in cofferdam; *Huallago*, install steam and exhaust lines to sanitary pump as directed by chief engineer, etc.; *Crijnssen*, repair copper pipe (exhaust) and pack one valve on steering engine; *Silverado*, dock and undock; clean and paint bottom; remove old and install new tail shaft and work in connection there-

with; barge *No. 116*, dock and undock; test all compartments and stop leaks; repair A-frames, sheathing, fenders, etc.; motor schooner *Laura C. Hall*, dock and undock; renew planks on bottom as directed; repair foundation of port engine; replace flywheel key on port engine, etc.; U. S. submarine *R–25*, remove anchor gear; increase clutch clearance; install listening apparatus, etc.; U. S. S. *Hannibal*, steamships *Cuba*, *San Pablo*, *Caribbean*, *Heredia*, *Solano*, *Abangarez*, *Harold W. Walker*, *St. Jean*, minor repairs.

Next Final Examination for Appointment of Second Lieutenants.

HEADQUARTERS PANAMA CANAL DEPARTMENT,
QUARRY HEIGHTS, BALBOA HEIGHTS, C. Z., June 1, 1921.

The following excerpt from a cablegram from The Adjutant General of the Army is published for the information of all concerned:

"Babbitt, Balboa.
No. 974—May 28.

Par. 1. Next final examination appointment Second Lieutenants Regular Army will be held beginning August 22, 1921, under provisions Army Regulations 605-5. Preliminary examination report at once and continue until August 13. Give wide publicity throughout your area.
(210.1)

HARRIS."

By command of Brigadier General Babbitt:

H. O. WILLIAMS,
Chief of Staff.

Official:
J. W. CRAIG,
Adjutant.

Dry Season, 1920-1921.

The recent dry season began about December 8, 1920, and ended about May 11, 1921, and although near the average so far as rainfall was concerned it was of a duration comparable to the dry season of 1911-1912, and 1919-1920.

Comparative rainfall figures for these three periods are given below:

RAINFALL (INCHES.)

Stations.	1920–1921. December 8 to May 11, inclusive.	1919–1920. December 16 to May 13, inclusive.	1911–1912. December 1 to May 7.
	Inches.	*Inches.*	*Inches.*
Porto Bello	23.87	10.18	5.74
Colon	14.05	5.26	6.37
Gatun	13.16	3.37	10.30
Monte Lirio	14.96	2.41	9.29
Trinidad	9.24	3.71	8.97
Gamboa	7.69	2.52	3.03
Alhajuela	5.81	1.78	1.02
Vigia	4.50	1.51	1.60
Culebra	2.94	2.79	3.85
Empire	4.38	3.02	3.20
Pedro Miguel	4.60	6.15	6.29
Balboa Heights	10.64	4.46	4.76

In order to make comparisons with previous dry seasons and use all available records, the following table is presented. It is worked up for the normal 4-month dry season. This table gives the total rainfall for the different sections and the entire Canal Zone and vicinity for the 4-month dry seasons since American occupation, also the normal 4-month dry season rainfall.

RAINFALL (INCHES) FOUR-MONTH (JANUARY-APRIL) DRY SEASON.

Year.	Pacific section.	Central section.	Atlantic section.	Canal Zone.
	Inches.	*Inches.*	*Inches.*	*Inches.*
1905	5.68	7.17	12.55	8.14
1906	5.97	7.99	10.94	8.22
1907	.40	1.44	7.93	2.80
1908	1.86	4.85	9.43	5.25
1909	8.64	12.93	28.07	15.64
1910	8.84	15.37	23.38	15.74
1911	7.63	6.65	11.10	8.01
1912	1.82	2.55	4.32	2.81
1913	2.88	5.61	13.28	6.84
1914	3.62	4.74	8.30	5.35
1915	7.58	12.80	23.42	14.15
1916	7.06	10.31	12.41	10.02
1917	2.37	3.78	6.19	4.03
1918	7.77	8.38	11.20	8.93
1919	1.30	2.86	4.93	2.99
1920	2.39	2.07	4.10	2.66
1921	4.22	6.29	10.55	6.84
Normal dry season	4.28	7.27	12.63	7.86

It is well to note that the Panama Canal water supply depends principally on rainfall over the Atlantic section and the upper Chagres watershed, and the discharge from the Chagres River will be high or low depending upon the amount of rainfall occurring in these sections. During the 4-month period, January to April, 1921, the rainfall over the Atlantic section was 15 per cent below the 17-year average, while the Chagres River watershed rainfall was 9 per cent below the 20-year average.

The Chagres River discharge was 40 per cent below the 20-year, 4-month dry season average, or 752 c. f. s. against a mean of 1,247 c. f. s. The lowest elevation of Gatun Lake was 82 feet, which occurred on May 21, one week earlier than the lowest elevation of last year, 81.65 feet, on May 28, 1920. The minimum discharge of the Chagres River between January 1 and May 21, 1921, was 350 c. f. s. on May 12, while the maximum momentary discharge for the same period was 5,535 c. f. s. on May 17, which occurred during the first freshet of the year.

A storage depletion from Gatun Lake of 22.8 billion cubic feet occurred between January 1 and May 21, 1921, compared with 24 billion cubic feet for approximately the same period last year. Little, if any, attempt was made to save water this year, while in 1920 the hydroelectric consumption was reduced approximately 50 per cent from March 3 to the beginning of the wet season. Evaporation from the lake's surface was lower this year than in 1920, but the useful losses of 1921 far exceed those of 1920.

The following data are indicative of the net inflow into Gatun Lake for the dry season months, since the formation of the lake:

NET YIELD IN C. F. S.[1]—DRY SEASONS OF RECORD.

	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	Average for the month.
December [2]	.....	2,690	5,335	4,307	7,010	7,673	4,986	9,218	2,158	4,939	3,698	5,201
January	2,959	400	2,583	1,739	2,570	1,863	1,111	3,023	4,541	769	1,216	1,798
February	3,053	271	1,298	744	4,207	1,320	139	431	73	—287	951	1,109
March	1,250	—392	678	167	823	698	—182	36	—50	—385	—121	229
April	2,355	—363	567	308	5,400	1,076	447	1,119	3,250	—706	244	1,245
May	6,363	2,771	4,992	3,219	6,111	4,063	4,635	7,964	4,352	583	2,109	4,287

[1] Net yield is the total yield minus the evaporation.
[2] Decembers are of previous year, *i. e.*, December, 1910, is in 1911 dry season.

July Weather Probabilities.

The following weather conditions may be expected in the Canal Zone during the month of July, 1921. These predictions are based on the weather records at Cristobal and Balboa Heights for the last 14 and 16 years, respectively:

Winds—A continuation of the rainy season conditions of June may be expected. Light variable winds will be general over the Isthmus, averaging about 9 miles an

hour on the Atlantic Coast and about 7 miles an hour on the Pacific Coast. On the Atlantic side north winds slightly exceed those from any other direction, while northwest winds predominate on the Pacific side. Maximum velocities in excess of 30 to 35 miles an hour need not be expected.

Rain—Heavy showers may be expected over the Isthmus during July. The July average for 50 years at Colon is 16 inches.

The 24-year average for July at Balboa Heights is 7.63 inches. The average number of days with 0.01 inch of rain or more is 21 on the Pacific side and 25 on the Atlantic. The average number of days on which the rainfall equals or exceeds 1 inch is 2 on the Pacific and 5 on the Atlantic Coast.

Fogs—No fogs are likely to occur at either Canal entrance, but night and early morning fogs may be expected quite frequently over the interior. Most of these will be light, however, and will be dissipated by 8.30 a. m.

Temperature—The average air temperature will be about 80° F. on both coasts. The mean daily range of temperature will be about 15 degrees on the Pacific side and about 8 degrees on the Atlantic side. The extremes of record on the Atlantic side are 89 and 70 degrees, respectively, and on the Pacific side 95 and 67 degrees.

Relative humidity—The relative humidity will be about 85 per cent on both coasts; the daily range, however, will be considerably greater on the Pacific side.

Storms—Local rain and thunder squalls may be expected quite frequently during the month. During these storms comparatively high wind velocities occur, but they are of too short duration to cause a rough sea. The West Indies hurricane season extends from June to November. The path of these storms lies too far to the north, however, to materially affect weather conditions on the Isthmus.

Tides—The tidal fluctuations of the Atlantic side are too small to affect navigation. Balboa tide predictions for July are given below: These are taken from "Tide Tables for 1921" published by the Department of Commerce, Washington, D. C.

Day of– W.	Day of– Mo.	Time and Height of High and Low Water.				Day of– W.	Day of– Mo.	Time and Height of High and Low Water.				Day of– W.	Day of– Mo.	Time and Height of High and Low Water.			
F	1	5:43	11:51	**6:23**	.....	Tu	12	2:52	9:04	**3:34**	**9:33**	S	23	5:48	11:56	**5:56**	.....
		4.1	13.7	**3.4**	.....			1.6	15.4	**2.3**	**14.1**			15.2	2.0	**14.7**	.....
S	2	0:26	6:44	**12:49**	**7:22**	W	13	3:54	10:07	**4:38**	**10:41**	S	24	0:14	6:22	**12:32**	**6:30**
		12.9	3.6	**14.5**	**2.6**			2.6	14.5	**2.8**	**13.6**			1.5	15.1	**2.3**	**14.4**
S	3	1:22	7:44	**1:41**	**8:17**	Th	14	4:56	11:15	**5:41**	**11:54**	M	25	0:49	6:55	**1:10**	**7:03**
		13.8	2.9	**15.4**	**1.5**			3.3	14.1	**3.1**	**13.1**			2.0	14.8	**2.8**	**14.0**
M	4	2:15	8:40	**2:31**	**9:08**	F	15	5:59	**12:22**	**6:44**	.....	Tu	26	1:26	7:29	**1:52**	**7:40**
		14.9	1.9	**16.2**	**0.3**			3.8	**14.0**	**3.1**	.....			2.6	14.5	**3.2**	**13.5**
Tu	5	3:04	9:30	**3:21**	**9:55**	S	16	0:58	7:02	**1:18**	**7:43**	W	27	2:09	8:08	**2:41**	**8:22**
		15.8	0.9	**16.8**	**-0.6**			13.2	3.9	**14.1**	**2.8**			3.3	14.1	**3.7**	**13.0**
W	6	3:54	10:17	**4:12**	**10:40**	S	17	1:51	8:00	**2:06**	**8:34**	Th	28	2:58	8:54	**3:38**	**9:15**
		16.6	0.1	**17.3**	**-1.3**			13.6	3.6	**14.4**	**2.3**			3.8	13.7	**4.0**	**12.5**
Th	7	4:45	11:03	**5:03**	**11:26**	M	18	2:37	8:50	**2:50**	**9:17**	F	29	3:58	9:52	**4:40**	**10:26**
		17.1	-0.3	**17.4**	**-1.5**			14.0	3.2	**14.7**	**1.8**			4.2	13.4	**4.0**	**12.3**
F	8	5:37	11:50	**5:56**	.....	Tu	19	3:19	9:33	**3:29**	**9:57**	S	30	5:02	11:04	**5:44**	**11:46**
		17.4	-0.4	**17.3**	.....			14.3	2.7	**14.9**	**1.4**			4.3	13.5	**3.7**	**12.7**
S	9	0:13	6:27	**12:39**	**6:47**	W	20	3:58	10:11	**4:07**	**10:31**	S	31	6:10	**12:17**	**6:50**	.....
		-1.2	17.3	**0.0**	**16.9**			14.7	2.2	**15.0**	**1.1**			3.9	**14.0**	**2.9**	.....
S	10	1:02	7:18	**1:33**	**7:39**	Th	21	4:36	10:46	**4:44**	**11:06**						
		-0.4	16.9	**0.7**	**16.1**			15.0	2.0	**15.1**	**1.0**						
M	11	1:55	8:10	**2:31**	**8:33**	F	22	5:13	11:21	**5:20**	**11:39**						
		0.5	16.2	**1.6**	**15.1**			15.1	1.9	**15.0**	**1.2**						

The tides are placed in the order of their occurrence; the *times* of high and low tides are shown on the upper lines. The figures in boldfaced type are hours and elevations between noon and midnight; *ante meridian* figures are given in the ordinary lightfaced type. The time is Cosmopolitan Standard for the meridian 75° W.

The *elevations* of the water are shown on the second line for each day; a comparison of consecutive heights will indicate whether it is high or low water. Heights are reckoned from mean low water springs, which is 8.3 below mean sea level and is the datum of soundings on the Coast and Geodetic Survey charts for this region. The depth of water may accordingly be estimated by adding the tabular height of the tide to the soundings, unless a minus (—) sign is before the height, in which case it is to be subtracted. The annual inequality or variation in the mean sea level is included in the predictions.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z. (telephone 286).

Instrument man; No. 693–amended, supplemental. Examination closed June 7, 1921.

Aeronautical draftsman, Navy Department; No. 318–amended, supplemental. Receipt of applications closed June 1, 1921.

Marine engine and boiler draftsman, marine engine and boiler draftsman (internal combustion), marine engine and boiler draftsman (aero), marine electrical draftsman, radio draftsman, Navy Department, No. 316-supplemental; receipt of applications closed June 1, 1921.

Ordnance draftsman, Navy Department, No. 317-supplemental; receipt of applications closed June 1, 1921.

Aeronautic engineer (male and female); $5.44 to $11.68 a day; form 1312; announcement No. 275; age, 20 years but not 70 years; vacancies exist in the naval aircraft factory, Navy Yard, Philadelphia, Pa., June 21, 1921.[1]

Airplane mechanic's helper (motor); (male and female); $1,000 to $1,400 a year; form 1800; announcement No. 272; age 18, but not 65 years; vacancies exist in Air Mail Service of Post Office Department; June 28, 1921.[1]

Airplane mechanic's helper (fuselage and rigging); (male and female); $1,000 to $1,400 a year; form 1800; announcement No. 272; age, 18 but not 65 years; vacancies exist in Air Mail Service of Post Office Department; June 28, 1921.[1]

Airplane mechanic (motors); (male and female); $1,200 to $1,800 a year; form 1800; announcement No. 272; age, 18 but not 65 years; vacancies exist in Air Mail Service of Post Office Department; June 28, 1921.[1]

Airplane mechanic (fuselage and rigging); (male and female); $1,200 to $1,800 a year; form 1800; announcement No. 272; age, 18 but not 65 years; vacancies exist in Air Mail Service of Post Office Department; June 28, 1921.[1]

Airplane pilot, Air Mail Service (male and female); $2,000 a year; form 1312; age, below 70 years; vacancies exist in Air Mail Service of Post Office Department July 5, 1921.[1]

Apprentice fish culturist (male and female); $600 to $960 a year; form 1312; age, 18 but not 45 years; vacancies exist in Bureau of Fisheries, Department of Commerce; June 22, August 3, September 21, 1921.

Associate dust explosion prevention engineer (male and female); $2,500 to $3,600 a year; form 2118; announcement No. 280; age, 18 but not 45 years; vacancies exist in Bureau of Chemistry, Department of Agriculture, Washington, D. C., June 21, 1921.[1]

Assistant dust explosion prevention engineer (male and female); $1,800 to $2,500 a year; form 2118; announcement No. 280; age, 18 but not 45 years; vacancies exist in Bureau of Chemistry, Department of Agriculture, Washington, D. C., June 21, 1921.[1]

Junior dust explosion prevention engineer (male and female); $1,440 to $1,800 a year; form 2118; announcement No. 280; age, 18 but not 45 years; vacancies exist in Bureau of Chemistry, Department of Agriculture, Washington, D. C., June 21, 1921.[1]

Associate development engineer (male and female); $2,500 to $3,600 a year; form 2118; announcement No. 280; age, 18 but not 45 years; vacancies exist in Bureau of Chemistry, Department of Agriculture, Washington, D. C., June 21, 1921.[1]

Assistant development engineer (male and female); $1,800 to $2,500 a year; form 2118; announcement No. 280; age, 18 but not 45 years; vacancies exist in Bureau of Chemistry, Department of Agriculture, Washington, D. C., June 21, 1921.[1]

Junior development engineer (male and female); $1,400 to $1,800 a year; form 2118; announcement No. 280; age, 18 but not 45 years; vacancies exist in Bureau of Chemistry, Department of Agriculture, Washington, D. C., June 21, 1921.

Dental laboratory mechanic's helper, $900 to $1,200 a year; dental laboratory mechanic, grade 1, $1,400 to $1,800 a year; dental laboratory mechanic, grade 2, $2,000 to $2,400 a year (male and female); forms 1312 and 2356; announcement No. 283; age, 18 but not 70 years; vacancies exist in Public Health Service; August 1, 1921.[1]

Electrolytic depositor (male and female); $6 per diem; form 304; age, 20 years and over; vacancies exist in Bureau of Engraving and Printing, Washington, D. C., July 6, 1921.

Expert appraiser, Estate Tax Division, (male and female); $3,000 to $4,000 a year; form 2118; age, 30 but not 70 years; vacancies exist in Bureau of Internal Revenue, Treasury Department; July 12, 1921.[1]

Flight test observer, Air Service at Large (male and female); $2,000 to $3,000 a year; age, 21 but not 35 years; vacancies exist in Engineering Division, Air Service at Large, War Department; July 5, 1921.[1]

Junior civil engineer, Bureau of Public Roads (male and female); $1,500 a year; form 1312; announcement No. 265; age, 20 but not 30 years, vacancies exist in Department of Agriculture; June 14, 1921.[1]

Junior economist (farm management), (male and female); $1,800 to $3,000 a year; form 1312; announcement No. 284; age, 21 but not 45 years; vacancies exist in Department of Agriculture, Washington, D. C., July 6, 1921.

Library assistant, $1,000 to $1,400 a year; research librarian (digesting), $1,800 to $2,400 a year; research librarian (cataloguing), $1,800 to $2,400 a year; form 1312; announcement No. 270; age, below 70 years; vacancies exist in Departmental Service, Washington, D. C., June 23, 1921.

Library specialist, $3,600 to $5,000 a year; senior educational advisor, $5,000 to $6,500 a year, (male or female); age, 35 but not 55 years; vacancies exist in the Bureau of Navigation, Navy Department, July 12, 1921.[1]

Local and assistant inspector of boilers, local and assistant inspector of hulls, $2,100 to $2,950 a year; (male and female); form 1087; age, 25 but not 55 years; vacancies exist in Steamboat–Inspection Service; July 6-7, 1921.

Master mechanic (machinery), (male and female); $2,000 to $2,400 a year; form 1800; announcement No. 267; age, below 65 years; vacancies exist in Raritan Arsenal, Metuchen, N. J., and Ordnance Department at Large; June 21, 1921.[1]

Photostat and blue-print operator, $1,200 to $1,800 a year; blue-print operator, $900 to $1,800 a year; photostat operator, $900 to $1,800 a year; form 1312; announcement No. 268; age, 18 but not 70 years; vacancies exist in the Departmental Service, Washington, D. C., June 22, 1921 (male and female).

Scientific observer (marine), (male and female); $1,800 a year; age, 21 but not 45 years; vacancies exist in the United States Coast Guard, Treasury Department; July 5, 1921.[1]

Student draftsman (male and female); $4 per diem; form 1312; announcement No. 285; age, below 70 years; vacancies exist in the Navy Department, Washington, D. C., August 1, 1921.[1]

Tool designer, Ordnance Department at Large (male and female); $1,500 to $2,400 a year; form 1312; age, 18 years and over; vacancies exist in the Ordnance Department at Large.[2]

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[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that date.

[2] Nonassembled. Applications will be received at any time until further notice.

COMMISSARY NOTE.

Price Reductions—Dry Goods.

Reduction in the price of dry goods continue. Fancy all white skirting with attractive self stripe have been reduced from $1.75 and $1.65 the yard to $1.25 the yard. These are 36 inches wide and may be obtained by asking for stock Nos. 51938, 51939, and 51940.

In fancy colored voiles there is a wide range of patterns, both in dark and light materials. The former range of prices was from 66 cents to $1.30 a yard. Reductions of as much as 45 cents a yard have been made on some of these. Fancy all white voiles have also declined in price and commissary customers may benefit thereby.

Lace net flouncings in several different patterns are now considerably lower in price. Numbers which have been retailed at $2.95 the yard are now $2, and corresponding reductions have been made on the higher-priced patterns.

To close out the present stock, another cut has been made on the line of children's gingham dresses. There are now very good values in this lot to be had at $2 each.

Women's full-fashioned silk hose in a variety of colors may be obtained for $1.50 per pair, which is $1 less than the price asked only a short time since.

Among other items which have responded to the decline in prices are satin petticoats, silk and cotton mixture petticoats, and soft finish bleached muslin suitable for women's and children's garments.

Official Circulars.

Appointment.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 1, 1921.

CIRCULAR No. 661-97.

Mr. George W. Green is appointed Municipal Engineer, effective this date, *vice* Mr. D. E. Wright, resigned.

JAY J. MORROW,
Governor.

Acting Electrical Engineer.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 28, 1921.

To all concerned—Effective May 31, and during the absence of Mr. W. L. Hersh on leave, Mr. A. C. Garlington will act as Electrical Engineer.

JAY J. MORROW,
Governor.

Return Serviceable Property to Stock.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 1, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

Owing to the reduction of work in practically all divisions, a large quantity of serviceable property is being presented for survey, as surplus, and it has been recommended by the Surveying Officer that a large percentage of these items be returned to stock.

The items returned to stock are just as serviceable as new items, and, as storekeepers complain of much difficulty in disposing of them, they have been instructed by the Chief Quartermaster to reissue items returned to stock before issuing any new items, in accordance with Circular No. 631.

JAY J. MORROW,
Governor.

Acting Chief Admeasurer.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 2, 1921.

All concerned—Effective June 6, 1921, Mr. Elmer Stetler will act as Member of the Board of Admeasurement and Chief Admeasurer at the port of Cristobal, during the absence on leave of Mr. F. E. Williams.

JAY J. MORROW,
Governor.

Accountable Official.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 28, 1921.

CIRCULAR No. 296.

Effective May 29, 1921, Mr. John H. Trower, Jr., is designated an accountable official of The Panama Canal, *vice* Mr. A. W. Degenaar, and as such will account for all material in stock at the Paraiso Store.

ELWYN GREEN,
Acting Auditor, The Panama Canal.

Approved:
JAY J. MORROW,
Governor.

Drums.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 26, 1921.

All concerned—We are informed by the Washington Office that they are receiving complaints from the Atlantic Refining Company concerning damaged condition in which many of their drums are returned by The Panama Canal, it being claimed that the drums are getting very rough usage while full.

The Washington Office has brought this matter to the attention of the Panama Railroad Company in New York with request that drums be more carefully handled, and the matter is being brought to your attention in order that rough handling after receipt at the Isthmus may be reduced to a minimum. Will you kindly do all in your power to correct this condition?

R. K. MORRIS,
Chief Quartermaster.

Sailing of Steamship "Allianca."

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
BALBOA HEIGHTS, C. Z., June 6, 1921.

All concerned—The steamship *Allianca* will sail from Cristobal for New York, via Port-au-Prince, Haiti, on Thursday, June 9, at 3 p. m., instead of on June 8 as previously announced.

S. W. HEALD,
Superintendent.

Dynamite.

PANAMA RAILROAD COMPANY,
OFFICE OF MASTER OF TRANSPORTATION,
BALBOA HEIGHTS, C. Z., May 31, 1921.

CIRCULAR NO. 1818:

To all concerned—Effective at once shipments of dynamite in less than carload lots will be handled by the Panama Railroad on Thursdays only.

Shippers must give the agent at the shipping point not less than 24 hours' notice of such shipments and the agent will arrange with this office for a certified and properly placarded box car to be used as a way car on the local freight to take care of the shipment.

Carload shipments of dynamite may be made on any day of the week when loaded in properly certified and placarded box cars as heretofore.

W. J. BISSELL,
Acting Master of Transportation.

Administrator's Sale.

The Administrator of Estates, room 301, Administration Building, Balboa Heights, will accept written bids up to noon, Wednesday, June 15, 1921, for the purchase of certain personal property, chiefly household effects, belonging to the estate of Steven D. McPhate, deceased American employee of the Panama Railroad Company.

Among the articles for sale is a 3-burner Perfection oil stove, with oven, located in the customs office, room 203, Terminal Building, Cristobal, while the other items to be sold are kept at the Administrator's office. Persons interested may call at these places to examine the property, and will find detailed lists thereof posted at the clubhouses and post offices.

Bids may embrace the entire lot of effects, or cover individual articles only. They should be submitted to the Administrator's office in sealed envelopes marked "Bid on Effects of Steven D. McPhate, deceased." No advance deposit of money with bids is required, and the Administrator reserves the right to reject any or all bids.

C. H. CALHOUN,
Administrator of Estates.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 671.

PORT OF CRISTOBAL—continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
June 1	Heredia	United Fruit Co.	New Orleans.
June 1	Crijnssen	Royal Netherlands W. I. Mail	Amsterdam via wayports.
June 1	Tivives	United Fruit Co.	New York via Kingston.
June 2	Colon	Panama Railroad Steamship Line.	New York via Haiti.
June 2	Carrillo	United Fruit Co.	Colombian ports.
June 2	Puerto Rico	French Line	St. Nazaire and wayports.
June 3	Hamlbal	United States Navy	Mosquito Bay.
June 4	Allianca	Panama Railroad Steamship Line.	New York.
June 4	San Pablo	United Fruit Co.	Port Limon.

*DEPARTURES.

Date.	Vessel.	Line.	For—
June 1	Elm Leaf	Anglo-Saxon Petroleum Co.	Tampico.
June 2	Tivives	United Fruit Co.	New York via wayports.
June 2	Carrillo	United Fruit Co.	New York via Kingston.
June 2	Heredia	United Fruit Co.	New Orleans via Bocas del Toro.
June 3	Crijnssen	Royal Netherlands W. I. Mail	Puerto Colombia.
June 4	San Pablo	United Fruit Co.	Boston.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—
June 1	Anyo Maru	Toyo Kisen Kaisha	High seas.

Date.	Vessel.	Line.	For—
June 1	Anyo Maru	Toyo Kisen Kaisha	Valparaiso.
June 3	Anyo Maru	Toyo Kisen Kaisha	Valparaiso.

*Other than ships passing through the Canal.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.
PUBLISHED WEEKLY.
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The Panama Canal Record, Balboa Heights, Canal Zone, or
The Panama Canal, Washington, D. C.
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at Cristobal, C. Z., under the Act of March 3, 1879.

Volume XIV. Balboa Heights, C. Z., June 15, 1921. No. 44.

Development of the Fruit Trade.

Reference has been made in several recent issues of THE PANAMA CANAL RECORD to the fruit trade through the Panama Canal. It is not yet large enough to take a conspicuous place in traffic statistics, but it is expanding very rapidly, and there is good reason to believe that within a comparatively short time it will employ a considerable tonnage.

The trade is being developed along three routes. Apples from Washington and citrus fruit from California are moving by water to the east coast of the United States. Northwestern apples and California citrus fruits are moving to the United Kingdom and Europe, and Chilean fruit is being shipped to New York. The shipments of the past year have been experimental. They have demonstrated that the water route is practicable and economical. The fruit was delivered quickly, in good condition and at low cost. Now that this is established arrangements are being made for future shipments on a large scale.

The northwestern apple growers and the California citrus fruit growers are organized for the marketing of their crops, and are in a position to contract with steamship companies for cargo or part cargo lots. It is reported that they have joined in an agreement to guarantee to one steamship company 9,500 carloads of perishable fruit to be delivered in Atlantic and Gulf markets at a rate substantially lower than the present all-rail rate. Washington apple growers guarantee 4,000 carloads of the total. They will ship their apples to Seattle, and store them in public terminals, to be loaded when refrigerator space is available. To stimulate the movement of fruit through Seattle, the Port Commission has reduced its charge for the storage of apples in transit from $2 to $1.60 a ton. Oranges and lemons have been successfully shipped from Los Angeles to New York under refrigeration, arriving in 19 days. It is claimed that the percentage of decay was negligible in comparison with the deterioration experienced in rail shipments. The freight rate on the experimental cargo is said to have been 70 cents per 100 pounds as compared with an all-rail rate of $1.66½.

It is reported that the direct movement of apples from the Pacific Coast to Europe inaugurated during the past winter season was very successful. A total of 175 carloads were shipped, and a heavy demand for space for the crop of this year has already developed. Nine steamers are now scheduled for the Pacific Coast-European service with cold storage equipment for handling fresh fruit through the tropics. They will afford carrying space for about three-quarters of a million boxes. It is estimated that there will be a total of about five million boxes available for export.

In March there passed through the Canal what was reported to be the first shipment of citrus fruit from Los Angeles to London by water.

It consisted of 10 carloads of oranges and 100 boxes of fancy lemons. While this particular trade may develop, the competition of Mediterranean citrus fruits in the European market is an adverse factor.

A first shipment of fruit from Chile to New York was made in April with successful results. The South American Line, a Chilean company, is reported to be building 3 large vessels with refrigerator equipment to be placed in the New York service carrying fresh fruit and vegetables. An important element in this new trade is the fact that Chile lies south of the equator and its seasons are the reverse of those of the United States, so that Chilean fruit will reach northern markets when domestic supplies are low.

A Comparison of the Commercial Traffic Through the Panama Canal for the Fiscal Years 1920 and 1921.

Below is given a comparative table showing the Panama Canal net tonnage, tolls paid, and tons of cargo carried by commercial vessels transiting the Canal during the fiscal year ending June 30, 1920, and for the 11 months of the current fiscal year. It will be seen that the 11 months' traffic for the current fiscal year, is considerably in excess of last year's traffic, which, in turn, exceeded the traffic of any preceding year.

	Panama Canal net tonnage.		Tolls.		Tons of cargo carried.	
	1920–1921.	1919–1920.	1920–1921.	1919–1920.	1920–1921.	1919–1920.
July	856,798	510,808	$842,312.05	$538,470.76	886,814	568,172
August	951,345	586,111	936,209.44	609,442.16	1,040,740	715,724
September	1,008,785	586,186	1,010,150.63	588,983.09	1,009,557	638,270
October	935,579	670,100	911,825.58	661,301.74	991,066	705,881
November	929,875	597,148	933,912.11	571,273.98	984,910	575,480
December	1,027,918	927,726	1,007,849.32	891,358.34	1,076,539	924,479
Six months ending December 31	5,710,300	3,878,079	5,642,259.13	3,860,830.07	5,989,626	4,128,006
January	1,094,323	765,533	1,095,857.46	766,754.69	1,177,053	894,628
February	916,838	703,462	917,412.49	703,884.86	952,904	780,488
March	1,112,818	819,362	1,105,536.55	831,304.20	1,084,563	894,516
April	955,503	822,471	927,977.09	805,571.50	907,613	867,521
May	864,617	852,425	835,882.77	834,428.64	792,735	974,919
June	.....	704,712	.....	711,159.19	.....	834,421
Eleven months ending May 31	10,654,399	7,841,332	10,524,925.49	7,802,773.96	10,904,494	8,540,078
Fiscal year ending June 30	.....	8,546,044	.....	8,513,933.15	.....	9,374.499
Monthly average.	[1]968,582	712,170	[1]956,811.40	709,494.43	[1]991,318	781,208

[1] For 11 months only.

The U. S. S. "Tennessee" En Route to Join the Pacific Fleet.

This first-class battleship of the superdreadnaught type passed through the Canal on June 8, proceeding under orders from Norfolk to San Pedro to join the Pacific Fleet at that base. The *Tennessee* is the newest of this class of superdreadnaughts; she was constructed at the New York Navy Yard and placed in commission last July, this being her first voyage in regular service. A sister ship, the *Maryland*, is expected to be ready for service during the latter part of this year.

The *Tennessee* represents the latest approved design in the United States Navy for ships of this class. She is 624 feet in length over-all; has a beam of 97 feet, 3½ inches; drew 34 feet of water through the Canal; and, as loaded, had a displacement of 34,000 tons. Her cruis-

ing radius is 12,000 miles, with electric-driven engines and oil-burning boilers; the power generated being 28,500 I. H. P. at normal full speed.

The armament consists of twelve 14-inch guns; fourteen 5-inch guns; and four 3-inch antiaircraft guns. On this voyage the *Tennessee* was in command of Capt. R. H. Leigh, United States Navy, with a personnel of 66 officers, 64 chief petty officers, 1,281 bluejackets, and 65 marines.

Her passage through the Canal was entirely successful; leaving Cristobal at 8 a. m. on the 8th, she passed the Port Captain's office at Balboa at 5.55 p. m. proceeding to sea without stop. Canal officials aboard the *Tennessee* during her Canal transit were the Governor, Col. Jay J. Morrow; the Marine Superintendent, Capt. E. P. Jessop; and Lieut. Commander S. L. Henderson, Port Captain at Balboa.

Commodities in May.

Cargo passing through the Canal during the month of May has been classified by commodities, with the areas of origin and destination of the shipments, and is shown on pages 686 to 690, inclusive. The data are as close to accuracy as has been possible with the use of the cargo declarations; but in addition to the figures shown, small shipments of the commodities included in the tables and of other commodities not listed separately, passed through under the designation of "general cargo."

The tables show the origin of each commodity; next, under the heading "From," the origin of the shipments making up that total; and under the heading "To," show the distribution of the total among the several areas of destination.

Amendment to Departmental Tariff "A."—Fuel Oil.

THE PANAMA CANAL,
PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., June 4, 1921.

The following amendment is made to Departmental Tariff "A"—Schedule of Rates for Supplies and Services Furnished to Departments and Divisions of The Panama Canal, Panama Railroad, other Departments of the United States Government, Employees, and those Entitled to Employees' Rates, except where otherwise specified:

CLASS III. MATERIALS AND SUPPLIES.

ITEM 4.—FUEL AND DIESEL OILS.

Effective July 1, 1921.

FUEL OIL.

	Per barrel of 42 gallons.
At Balboa and Cristobal in bulk:	
1. To departments and divisions of The Panama Canal and Panama Railroad	$1.75
At Balboa and Cristobal in drums and barrels:	
4. To departments and divisions of The Panama Canal and Panama Railroad	1.75

JAY J. MORROW,
Governor, The Panama Canal.
President, Panama Railroad Company.

NOTE—The above amendment will be included in Supplement No. 3 to Departmental Tariff "A," when this supplement is issued.

Postal Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight June 11, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Duendes	4	5.55	5	9.15	5	15.47	5	16.55	British	Pacific Steam Navigation Co	390.0	50.0	21.2	London	Valparaiso	General	2,838	6,014	4,494
Gurth	5	9.55	5	10.15	5	17.02	5	19.12	Norwegian	Det. Selmerske Rederi T	366.0	49.8	21.0	Hamburg	Valparaiso	General and coal	3,323	4,358	3,356
Cricket	5	21.26	6	6.15	6	12.52	6	18.25	American	Cricket Steamship Co	210.0	41.0	14.6	Pto. Colombia	San Francisco	Coffee	318	1,410	916
Canadian Rover	5	18.37	6	6.20	6	13.36	6	15.03	British	Canadian Government	251.0	43.0	22.8	Galveston	Vancouver	Sulphur	3,050	2,551	1,613
Agwimars	5	19.00	6	6.18	6	15.01	6	16.10	American	Atlantic Gulf & Western S.S Co.	429.0	59.3	26.2	Port Arthur	Shanghai	Petroleum	9,337	7,851	5,552
Mineola	6	8.53	6	12.37	6	19.20	6	20.45	American	W. R. Grace & Co	298.6	49.0	19.6	Baltimore	Libitos	Oil well supplies	2,376	2,835	1,822
Somerset	6	19.03	7	6.31	7	14.01	7	15.10	British	Federal Steamship Co	460.0	62.0	22.0	Newport News	Auckland	Coal	2,673	9,943	7,530
Acajutla	5-31	14.57	7	9.32	7	15.34	7	16.25	British	Pacific Steam Navigation Co	215.7	33.7	14.1	Cristobal	Champerico	General	642	1,273	706
Hullaga	1	14.15	7	10.10	7	16.46	7	19.38	Peruvian	Peruvian Line	360.0	44.7	20.0	Cristobal	Ilo	General	780	4,514	2,386
Cuba	4	12.30	8	6.10	8	13.00	8	22.00	American	Pacific Mail Steamship Co	307.0	42.0	22.0	Habana	San Francisco	General	1,900	3,429	2,206
Bologna	4	14.14	8	6.20	8	13.00	8	14.40	Italian	La Veloce Line	384.0	46.8	20.0	Genoa	Valparaiso	General	736	5,531	3,773
Tennessee [1]	6	6.35	8	8.00	8	17.55	8	19.00	American	United States Navy	624.0	97.0	33.1	New York	Los Angeles	.....	.....	.....	.....
Eemdijk	7	18.19	8	10.41	8	18.46	8	19.50	Dutch	Holland-American Line	469.0	58.0	17.6	Rotterdam	Los Angeles	General	2,260	8,514	6,066
Cauca	3	17.21	8	11.18	8	19.21	8	20.35	British	Pacific Steam Navigation Co	246.0	35.0	14.6	Cristobal	Guayaquil	General	327	1,582	1,023
Siam [2]	8	14.05	9	6.15	9	13.33	9	21.20	Danish	East Asiatic Steamship Co	410.0	55.0	20.0	Antwerp	Guayaquil	General	3,500	7,068	5,303
Lompoc	8	22.25	9	6.50	9	14.32	9	15.45	British	C. T. Bowring & Co	435.0	55.9	27.3	Tampico	Taltal	Fuel oil	8,500	7,496	5,311
Lepanto	8	21.24	9	7.40	9	15.16	9	16.28	British	Ellerman Wilson	410.0	53.0	22.6	New York	Lyttleton	General	4,500	6,395	4,760
Trontolite	9	2.05	9	8.20	9	15.16	11	6.35	British	Standard Oil Co	419.0	57.2	25.0	Montreal	Vancouver	Crude petroleum	9,000	7,345	5,429
Santa Elisa	9	13.15	9	14.00	10	11.53	10	21.05	American	W. R. Grace & Co	360.3	51.0	23.1	New York	Valparaiso	General	2,875	5,957	4,325
Silverado	5-25	20.45	10	6.05	10	12.27	11	12.33	American	General Steamship Corp. (S. B.)	215.6	42.0	13.0	Cristobal	Callao	Ballast	.....	2,460	1,714
West Caddo	9	9.27	10	6.10	10	13.28	10	14.35	American	Pacific Mail Steamship Co. (S.B.)	410.0	54.0	21.7	Baltimore	San Francisco	Gen., navy sup	5,000	6,617	4,925
Keystone State	8	13.04	10	6.13	10	15.05	10	16.15	American	Admiral Line, P. S. S. Co. (S. B.)	518.0	72.0	25.0	Philadelphia	Seattle	Ballast	.....	15,286	10,498
Gen. H. F. Hodges	2	15.19	10	9.04	10	15.43	10	16.50	American	Panama Railroad Steamship Line	323.5	39.0	14.0	Cristobal	Guayaquil	Ballast	.....	3,013	1,574
Laura C. Hall [3]	5-22	15.10	10	9.45	10	17.39	11	12.02	British	Pacific Metals Corporation	81.0	25.5	9.0	Cristobal	Buenaventura	Ballast	.....	130	69
Alaskan	10	10.03	10	10.33	10	17.29	11	10.25	American	American-Hawaiian Line	470.1	57.2	21.0	New York	Los Angeles	General	3,600	9,250	6,901
Toyohashi Maru	10	10.50	11	6.10	11	13.51	11	15.00	Japanese	Nippon Yusen Kabushiki Kaisha	445.0	53.0	24.11	New York	Yokohama	General	7,817	7,666	5,529
Neches [4]	10	7.54	11	6.10	11	12.45	.....	.....	American	United States Navy	477.0	55.0	26.0	Fall River	Balboa	Fuel oil	.....	.....	.....
Honolulu	10	17.40	11	6.45	11	16.15	12	1.27	American	Moore & McCormick	399.0	51.0	26.8	Norfolk	San Diego	Navy coal	7,192	.....	.....
West Togus	11	23.17	11	7.00	11	14.40	11	15.50	American	N. Atl. & Western S S. Co. (S.B.)	409.8	54.2	17.8	Boston	Seattle	General	1,625	6,589	4,838
D. G. Schofield	11	6.25	11	8.43	11	15.35	11	15.59	American	Standard Oil Co	439.5	58.0	25.8	Tampico	San Francisco	Naphtha	10,000	8,912	6,254
Lewis Luckenbach	11	7.09	11	9.25	11	17.22	11	21.50	American	Luckenbach Line	496.0	68.2	21.0	Philadelphia	San Francisco	General	4,714	11,487	8,732
Bolton Castle	11	9.40	11	10.45	11	17.52	11	21.30	British	James Chambers & Co	424.2	53.0	25.0	New York	Yokohama	General	6,000	6,489	4,869

[1] Battleship. [2] Motor ship. [3] Motor schooner. [4] Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

A. F. Coats [5]	5–26	18.00	6	9.05	6	18.01	8	8.45	American	D. M. Scott	172.3	37.9	10.6	Pisagua	Mobile	Ballast	.....	662	556
Victoria	6	12.10	6	12.56	6	19.45	7	12.10	British	Pacific Steam Navigation Co.	401.4	52.3	22.6	Valparaiso	Liverpool	General	3,166	6,887	4,575
Terrier	7	5.00	7	8.11	7	15.50	7	18.13	Norwegian	W. Wilhelmsen	400.0	52.0	24.5	Taltal	New Orleans	Nitrate	8,000	5,631	4,120
Jamaica	7	8.30	7	10.01	7	17.00	11	17.37	British	Pacific Steam Navigation Co.	220.0	34.0	10.9	Tumaco	Cristobal	General	83	1,187	622
Liebre	7	10.35	7	11.04	7	17.54	7	22.05	American	General Petroleum Co	435.0	56.2	19.0	Iquique	Tampico	Ballast	.....	7,567	5,089
Albionstar	7	16.00	8	6.43	8	14.43	8	15.33	British	Blue Star Line	450.0	58.6	20.0	Auckland	Newport News	Frozen beef	4,051	8,317	5,530
Argyll	8	8.30	8	9.07	8	15.45	8	17.06	French	French Line	320.2	40.7	18.6	Guayaquil	Tampico	Ballast	.....	3,141	2,096
Santa Olivia	8	18.00	9	6.33	9	13.20	9	13.20	American	W. R. Grace & Co	404.6	53.9	16.0	Callao	New York	Ballast	.....	6,779	4,921
Artigas	8	16.00	9	7.38	9	14.35	9	14.35	American	N. Atl. & Western S. S. Co. (S. B.)	390.0	54.2	24.2	San Francisco	Boston	General	3,270	6,161	4,427
Texan	8	22.30	9	8.03	9	15.57	9	15.57	American	American-Hawaiian Line	471.0	57.2	24.6	Seattle	Boston	Lumber, general	7,300	9,154	7,033
Argosy	9	11.35	9	12.27	9	20.10	10	11.45	American	Wessel-Duval & Co. (S. B.)	390.0	54.2	24.2	Iquique	Wilmington	Nitrate	7,226	6,161	4,433
Aysen	10	1.30	10	7.53	10	14.38	.....	.....	Chilean	South American Steamship Co.	379.6	44.3	19.0	Valparaiso	Cristobal	General	230	4,535	3,068
Peru	9	21.35	10	11.11	10	17.31	.....	.....	British	Pacific Steam Navigation Co.	350.0	43.1	17.0	Valparaiso	Cristobal	General	83	4,095	2,655
Ensley City	8	16.30	10	12.59	10	20.28	10	20.28	American	Isthmian Steamship Co	395.4	55.0	28.0	San Francisco	Hull, England	(6)	7,76	7,285	5,256
Santa Paula	11	2.30	11	7.40	11	15.40	11	21.55	American	W. R. Grace & Co	420.0	53.9	28.0	Talcahuano	Charleston	Nitrate of soda	8,83	6,744	4,824

[5] Sailer.

[6] Barley, flour, and general.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
June 5	Atenas	United Fruit Co	New Orleans via wayports.	June 5	Puerto Rico	French Line	Puerto Colombia.
June 6	Caribbean	Panama Railroad Cattle Industry	Cartagena.	June 5	Atenas	United Fruit Co	Bocas del Toro.
June 6	Cartago	United Fruit Co	New Orleans.	June 5	Tamar	Royal Mail Steam Packet Co	Cartagena.
June 7	Pastores	United Fruit Co	New York via wayports.	June 6	Colon	Panama Railroad Steamship Line	New York.
June 8	San Blas	United Fruit Co	Boston via wayports.	June 8	Caribbean	Panama Railroad Cattle Industry	Cartagena.
June 8	Atenas	United Fruit Co	Bocas del Toro.	June 8	Atenas	United Fruit Co	New Orleans.
June 10	Martinique	French Line	Havre.	June 8	Pastores	United Fruit Co	New York via Port Limon and Habana.
June 11	Coronado	Elders & Fyffes, Ltd	Port Limon.	June 9	Sacramento [7]	United States Navy	Galveston.
				June 9	Allianca	Panama Railroad Steamship Line	New York via Haiti.
				June 9	San Blas	United Fruit Co	Port Limon.
				June 9	Cartago	United Fruit Co	New Orleans via Bocas del Toro.
				June 11	Coronado	Elders & Fyffes, Ltd	Kingston.

[7] Gunboat.

*Other than ships passing through the Canal.

Classification of Cargo Passing Through the Panama Canal, Showing Origin and Destination of Same, Month of May, 1921.

COMMODITY STATISTICS.

ATLANTIC TO PACIFIC.

(Figures represent tons of 2,240 pounds.)

Commodity.	Total.	From— East coast of South America.	East coast of Canada.	East coast of Mexico.	Cristobal, C. Z.	Other Europe.	British Isles.	East coast of United States.	To— West coast of South America.	West coast of United States.	Far East.	Australasia.	West coast of Canada.	West coast of Central America.	Balboa, C. Z.	Hawaii.
Aerated waters	90							90		90						
Agricultural implements	377					19		358	231	146						
Alcohol	53				53					53						
Ammunition	92							92		92						
Ammonia	2,052					487		1,565		487						1,565
Asbestos	134		134									134				
Auto accessories	1							1		1						
Automobiles	294					49	12	233	97	2	176	19				
Borax	3							3			3					
Brick	244						119	125	244							
Canned goods:																
Fish	458					53	52	353	13	393		52				
Fruit	630						1	629		629		1				
Vegetables	35							35		35						
Carbon black	105							105			105					
Cement	3,121				11	1,025	582	1,503	2,356	473		182		11	99	
Chalk	1,000					1,000				1,000						
Chemicals	300				17	220	20	43	233	22	10	20		15		
Coal	26,096						3,334	22,762	8,566	1,000		16,530				
Coal tar	30						30		30							
Coffee	103				27			76		103						
Cold storage (lard)	75				75				75							
Cotton, raw	9,514					16		9,498	16		9,498					
Earthenware	61						61		61							
Flour	61				15			46	53					8		
Fruit, dried	102					100	2		100			2				
Glassware	765					648		117	389	259	117					
Hats	6					4	2		4			2				
Hemp	11					11			11							
Jute	36						36		36							
Liquor	1,533		66		135	408	847	77	499	10		831	68	125		
Lumber	28							28		28						

Manufactured goods:																
Iron and steel	51,824		520		6	1,425	2,958	46,915	5,831	26,602	11,412	7,109	300			570
Machinery	9,416					432	1,661	7,323	2,512	2,084	3,820	1,000				
Railroad material	10,752					85	650	10,017	2,118	709	7,375	500	50			
Textiles	2,105					823	731	551	1,525	490	10	80				
Other	3,604				90	3	278	3,233	508	2,160	816	30		90		
Marble	545					545			545							
Matches	43					23	20					20		23		
Metals:																
Copper	961							961		240	721					
Iron	3,247				53	1,290		1,904	1,104	490	1,600			53		
Lead	97						72	25			25	72				
Nickel	186							186			186					
Silver	1							1		1						
Tin	2,135						40	2,095	28	2,095		12				
Musical instruments	18							18		18						
Oils:																
Crude	87,720			87,720					27,562	41,829	7,879				10,450	
Refined	47,371				6	2	200	47,163	195	8,860	26,896	11,420				
Linseed	365						250	115		115		250				
Olive	212					187		25	187	25						
Vegetable	20						20					20				
Ores:																
Iron	907				43		70	794		837		70				
Manganese	218							218			218					
Paint	140				8			132	1	131				8		
Paper	863		196		4	113	98	452	112	250	237	264				
Peanuts	81							81		81						
Pencils, slate	66						8	58			58	8				
Perfumery	7				7				7							
Phosphorus	7						7					7				
Pulp, wood	153							153	50		103					
Quebracho extract	226	226									226					
Rosin	756							756		355	387			14		
Rubber, manufactured	73						13	60		60		13				
Salt	931	801					130		801			130				
Soda	177						140	37	177							
Sulphur	10,500							10,500		5,000		5,500				
Tobacco	3,168				1		3	3,164	104	174	2,186	703		1		
Wax, paraffin	90							90	90							
Woods, hard	19					4		15	4		15					
General	94,909	104	480		3,099	10,433	12,000	68,793	17,396	42,029	18,918	16,004		562		
Grand totals	381,323	1,131	1,396	87,720	3,650	19,405	24,447	243,574	73,871	139,458	92,997	60,985	418	910	10,549	2,135

PACIFIC TO ATLANTIC.

(Figures represent tons of 2,240 pounds.)

Commodity.	Total.	From—								To—							
		Balboa.	Hawaiian Islands.	West coast of Central America.	West coast of Canada.	Australasia.	Far East.	West coast of United States.	West coast of South America.	East coast of United States.	British Isles.	Other Europe.	Cristobal, C. Z.	West Indies.	East coast of South America.	Egypt.	Mexico.
Abrasives	22					22					22						
Agricultural implements	2							2			2						
Alpaca	132								132	132							
Asphalt	134							134		34							100
Automobiles	36					27		9		3	30	3					
Bark:																	
Cascara	15							13	2	13			2				
Cinchona	4					4				4							
Peruvian	1								1				1				
Quillay	31								31		4	27					
Balsam	3			3									3				
Barley	7,294							1,299	5,995		5,790	1,504					
Beans and peas	3,023					301		2,089	633	921	301	540	21	1,240			
Beeswax	28								28	28							
Borax	1,850								1,850		600	1,250					
Canned goods:																	
Fish	3,304				138			3,166		1,043	2,186	50				25	
Fruit	5,979						124	5,850	5	3,809	1,670	500					
Meat	89					89					89						
Milk	376							376		376							
Vegetables	66							66		50				16			
Other	302				2	42		258		258	44						
Cacao	4,260								4,260	1,469	42	1,018	1,691		40		
Charcoal	141							141		141							
Chinaware	1							1									1
Coffee	9,476	150		6,636					2,690	2,917		746	5,613	200			
Cold storage:																	
Beef	2,464					2,464					2,464						
Butter	3,171					3,169			2		3,169		2				
Casein	1,174					1,174					1,174						
Cheese	8,216					8,216					8,216						
Glaxo	602					602					602						
Mutton	15,096					15,096					15,096						
Tallow	1,577					1,577					1,577						
Other	1,846					1,746		100			1,746	100					
Cotton seed oilcake	1,657								1,657		1,657						
Cotton seed	2,061								2,061		2,061						
Cotton, raw	2,020			30				445	1,545	158	1,624		238				
Dyewood	797			22					775	775			22				

Fruits:																	
Dried	5,341							5,341		634	30	4,677					
Fresh	2,978					862		2,116		1,580	862	536					
Flour	27,186							27,186		1,000	9,713	14,427	9		2,037		
Glue	23								23	23							
Hardwoods	74							74			74						
Hats	4					1			3	1			2				1
Hay	68								68				68				
Hemp	414				384		15		15	399	15						
Gum, Kauri	81					81					81						
Honey	13					2			11		2	11					
Horns and hoofs	9					9				1	8						
Indigo	1			1									1				
Infusorial earth	44							44		44							
Iodine	48								48	48							
Ivory nuts	1,036	85							951	730	2	20	284				
Leather	12							12		12							
Liquors	93				1		48		44	48	1		44				
Lumber	31,099				9,905			21,193	1	21,176	133	352		808	263	8,367	
Manufactured goods:																	
Iron and steel	449							449		5							444
Machinery	61					30		31			30	11		20			
Textiles	2								2				2				
Other	381			6				375				175	6				200
Metals:																	
Copper	11,289				664		298	2,400	7,927	6,845	4	1,002	3,438				
Iron	50								50	50							
Gold and silver	186			4					182	180	2		4				
Lead	150					150					150						
Quicksilver	45							45		45							
Tin	475								475		475						
Tungsten	20								20			20					
Nitrate	43,504								43,504	27,452	4,489	11,563					
Oats	2,785								2,785		2,785						
Orchilla	17								17		17						
Oil:																	
Mineral	44							44		44							
Vegetable	285						285			285							
Ores:																	
Copper	1,135								1,135	122	840	98	75				
Antimony	128						128			128							
Arsenic	31						31			31							
Gold and silver	96								96	34			62				
Hematite	8,000								8,000	8,000							
Platinum	1								1				1				
Tin	1,004								1,004		403	601					
Vanadium	666								666	666							
Other	25							25			25						
Paints	50							50									50
Paper	35						35			35							
Peanuts	101						36	65		101							
Rice	4,901						2,071	2,830		903			134	3,864			

PACIFIC TO ATLANTIC—Continued.

(Figures represent tons of 2,240 pounds.)

Commodity.	Total.	From—								To—							
		Balboa.	Hawaiian Islands.	West coast of Central America.	West coast of Canada.	Australasia.	Far East.	West coast of United States.	West coast of South America.	East coast of United States.	British Isles.	Other Europe.	Cristobal, C. Z.	West Indies.	East coast of South America.	Egypt.	Mexico.
Rubber, raw	849						849			849							
Rubber	17					2	15			15	2						
Rye	159								159			159					
Salt	100							100		100							
Seed, clover	17								17	17							
Seed, mustard	70							70		70							
Skins and hides	4,984	4		27		1,325	616	1,026	1,986	4,215	532	153	84				
Sugar	41,571		39,699	395					1,477	39,699	1,472		400				
Tapioca	86						86			86							
Tea	461						461			461							
Tobacco	70				1	69				69	1						
Walnuts	42								42	42							
Wax	6								6		3		3				
Wheat	91,620							89,842	1,778		21,943	69,677					
Wool	15,125					13,263	490	1,136	236	1,626	13,377	120	2				
Yerba Santa	25							25		25							
General	34,520	1		1,208	25	1,210	2,225	16,781	13,070	19,989	10,910	829	2,337	40	390	25	
Grand totals	411,412	240	39,699	8,332	11,120	51,533	7,813	185,209	107,466	150,016	118,547	110,169	14,549	6,188	2,730	8,417	796

Notice to Mariners—Obstructions to Navigation.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 20, 1921.

CIRCULAR No. 643-85:

The following obstructions to navigation have been reported by radio:

(*a*) On May 20, 1921 (10.15 a. m.), the master of the steamship *Nimrod* reports having passed, while in latitude 7° 6′ north, longitude 81° 46′ west, a large log with 3 heavy limbs, very dangerous to navigation.

(*b*) On May 20, 1921 (10.55 a. m.), the master of the steamship *Inca* reports having passed, while in latitude 5° 17′ north, longitude 79° 46′ west, a large tree, 40 feet long and with roots extending 7 feet above the water, very dangerous to navigation.

JAY J. MORROW,
Governor.

Nitrate Shipments.

The depression in the Chilean nitrate trade is reflected in the statistics of nitrate shipments through the Panama Canal since the first of the year, which show a continued shrinkage, the tonnage for May being less than one quarter of the January tonnage.

Month.	Tonnage.
January	195,885
February	191,928
March	141,026
April	118,729
May	43,504

During the calendar year, 1920, the total nitrate shipments through the Canal aggregated 1,995,906 tons, a monthly average of 166,325 tons. This was approximately one-third of the cargo moving through the Canal from the Pacific to the Atlantic. Reports from Chile and from London are not optimistic, and there appears to be little likelihood that shipments will be resumed on a large scale within the immediate future.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending June 11, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged.	Laded.
				Tons.	*Tons.*
Tamar	Pacific Steam Navigation Co		June 5		1,200
Colon	Panama Railroad Steamship Line		June 6		3,761
Acajutla	Pacific Steam Navigation Co		June 7		635
Huallago	Peruvian Line		June 8		776
Cauca	Pacific Steam Navigation Co		June 8		375½
Bologna	Italian Line		June 8		468
Cuba	Pacific Mail Steamship Co		June 8		2,903
Caribbean	Panama Railroad Cattle Industry	June 6	June 8	400	267
Cartago	United Fruit Co	June 6	June 9	1,178	283
Pastores	United Fruit Co	June 7	June 8	785	143
Eemdijk	Holland-American Line	June 7	June 8	100	(1)
Jamaica	Pacific Steam Navigation Co	June 7		60	
Atenas	United Fruit Co	June 8	June 8	7	19
San Blas	United Fruit Co	June 8	June 9	26	76
Siam	East Asiatic Steamship Co	June 8	June 9	21	(1)
Allianca	Panama Railroad Steamship Line		June 9		1,793
West Caddo	Pacific Mail Steamship Co	June 9	June 10	252	(1)
Peru	Pacific Steam Navigation Co	June 10		33½	
Aysen	Chilean Steamship Line	June 10		312	
Martinique	French Line	June 10		189	
Coronado	Elders & Fyffes, Ltd	June 11	June 11	150	1

[1] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending June 11, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged.	Laded.
				Tons.	*Tons.*
Jamaica	Pacific Steam Navigation Co.	June 7	June 7	1	.....
Cuba	Pacific Mail Steamship Co.	June 8	June 8	.....	113
Cauca	Pacific Steam Navigation Co.	June 8	June 8	.....	47
Aysen	South American Steamship Line	June 10	June 10	82	.....
Silverado	United States Shipping Board	June 10	June 10	.....	40
Peru	Pacific Steam Navigation Co.	June 10	June 10	58	.....
Laura C. Hall	Pacific Metals Corporation	June 11	June 11	.....	132

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended June 11:

Dredge *Cascadas*, docking, staging and cleaning, painting bottom, overhauling sea valves and strainers; repairs to main, backing, swinging, and spud engines, and hoist machinery; repairs to condenser; overhauling circulating engine; overhauling air pump; miscellaneous repairs to boiler mountings, and pipe work; renewing 85 per cent of fenders; patching canvas on upper deck and top deck; redriving loose rivets in swing circle and cleaning and painting swing circle and boom; repairs to sanitary system; repairing galley range; renewing forward spud well lining; installing lower spud gates; building cofferdam in after tank around spud well; testing after fresh water tank and redriving all loose rivets; steamships *Ensley City*, renewing approximately 24 fitted bolts and redriving approximately 50 rivets in main engine foundation; *Santa Elisa*, brazing one feed heater coil; repairing copper pipe in deck steam and exhaust; renewing nipple in refrigerating system.

PREVIOUSLY REPORTED.

Subchaser *No. 284*, minor repairs in engineer's department and sanitary system; steamship *Birmingham City*, main engine repairs; tug *Gorgona*, miscellaneous engineer's and deck department repairs; Spanish cruiser *España*, miscellaneous engineer's and deck department repairs and repairing damage caused by grounding; launch *Taboga*, general overhaul.

The following vessels were at the Cristobal shops for repairs during the week ended June 13:

Steamships *Allianca*, *General H. F. Hodges*, miscellaneous repairs and painting to engine, deck, and steward departments; *Salvador*, dry dock, clean and paint bottom; pump oil out of tanks and steam; fit emergency pump in cofferdam; *Ucayali*, furnish 6 men and foreman to clean in fireroom and bilges, etc.; *Peru*, overhaul capstan, bore cylinder and valve chamber and straighten crankshaft to circulating pump; U. S. subchaser *No. 288*, dry dock, clean bottom, examine sea valves, and repair where found necessary; U. S. S. *Poe*, remove bottom blow valve and renew with extra heavy pressure flanged valve, etc.; steamships *Keystone State*, renew joints in main steam line between throttle and governor valve; starboard side; overhaul and pack both main air pumps; examine and repack both main feed pumps; *Jamaica*, dock and undock; clean and paint bottom; draw tail shaft, etc.; tug Supply *No. 1*, install new piston ring on all cylinders and air compressor; clean and paint bottom; repair air cooling coils; U. S. S. *Gold Star*, clean and paint bottom; install 160 tubes in boiler and renew brickwork in both boilers; tug *Porto Bello*, clean and paint bottom; electric weld crack in bottom of H. P. cylinder; refasten bracket on turning gear of fire nozzle; clean strainers to sea suction on ship's hull; draw out broken stud in end of tail shaft and manufacture and install new stud and keeper plate, etc.; steamships *Martinique*, *Santa Elisa*, U. S. submarine *R–27*, steamships *Cartago*, *Liebre*, *Pastores*, tug *Tavernilla*, minor repairs.

College Entrance Examinations.

College entrance examinations will be held in the office of the Superintendent of Schools, Administration Building, Balboa Heights, during the week beginning June 20 and ending June 25, 1921. These are the examinations prescribed by the College Entrance Examinations Board for the leading colleges in the United States.

Length, Beam, and Draft of Commercial Vessels.

A classification of the commercial vessels passing through the Panama Canal in May, 1921, by length, beam, and salt water draft shows the following:

	Atlantic to Pacific.	Pacific to Atlantic.	All vessels.	Per cent of all ships.
Length.				
Less than 100 feet	1	2	3	1.5
100 to 200 feet	2	4	6	2.9
200 to 300 feet	17	18	35	16.6
300 to 400 feet	29	28	57	27.1
400 to 500 feet	51	56	107	50.9
Over 500 feet	.....	2	2	1.0
Totals ships	100	110	210	100.0
Aggregate length (feet)	37,780.0	40,694.3	78,474.3	.....
Average length (feet)	377.8	369.9	373.7	.....
Beam.				
Less than 30 feet	3	5	8	3.8
30 to 40 feet	9	12	21	10.0
40 to 50 feet	19	22	41	19.5
50 to 60 feet	64	63	127	60.5
60 to 70 feet	5	8	13	6.2
Total ships	100	110	210	100.0
Aggregate beam (feet)	5,019.0	5,459.4	10,478.4	.....
Average beam (feet)	50.2	49.6	49.9	.....
Draft.				
Less than 15 feet	11	11	22	10.5
15 to 20 feet	26	31	57	27.1
20 to 25 feet	30	41	71	33.8
25 to 30 feet	31	26	57	27.1
30 to 35 feet	2	1	3	1.5
Total ships	100	110	210	100.0
Aggregate draft (feet)	2,151.9	2,350.9	4,502.8	.....
Average draft (feet)	21.5	21.4	21.4	.....

Revision of Telephone Directory.

The copy for a revised telephone directory, to be issued as of July 15, 1921, will go to the printer July 1. All changes or corrections in the present directory should be forwarded to the Supervisor of Telephones, Balboa Heights, not later than July 1. Proof corrections will be made to July 15.

Firearm Permits.

Holders of, and prospective applicants for, firearm permits for the fiscal year beginning July 1, 1921, are notified of the requirement of resubmission of application, form 1319-3, in all cases whether of renewal or of new application. In the case of hunting permits the application must be accompanied by the authorized fee of $1. When renewing any class of firearm permit, the old expiring license card must be sent in. Form 1319-3 may be obtained at all Zone police stations.

Clerk Examination.

The local Civil Service Board announces open competitive examinations in the month of July, as follows: Clerk, Postal Clerk, and Clerk (with knowledge of stenography and typewriting). The examinations for clerk, and postal clerk will be held in the high school building, Balboa, C. Z., on July 9, while that for clerk (with knowledge of stenography and typewriting) will be held on July 16. The examinations begin at 9 a. m. Applications for these examinations should be completed and filed with the Secretary, Board of Civil Service Examiners, Balboa Heights, C. Z., a few days prior to the examination to be taken. These examinations are for The Panama Canal Service, and are open to men and women. The age limits are 18 and 45 years. The announcement number is 484-amended, and the application form is No. 1312. Any additional information may be secured from the local secretary, telephone 286, Balboa.

RATES OF PAY—GOLD ROLL.

Changes in Rates of Metal and Shop Trades.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 8, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective July 1, 1921, all increments from the legislative increase (bonus) in navy yard rates are abolished. This includes the $240 increase in annual compensation, also the 72 cents per diem increase granted for rates in excess of $1 per hour. These changes in navy yard rates result in coordinate rates here which are approved as follows, effective July 1, 1921:

	Rate.			Remarks.
	Hour.	26-day.	28-day.	
Boatbuilder, cabinetmaker, carpenter, fleet; planing mill hand (millman), shipjoiner, shipwright.	$1.08	$224.64	$241.92	
	1.00	208.00	224.00	
	.91	189.28	203.84	
	.86	178.88	192.64	
	.81	168.48	181.44	
	.76	158.08	170.24	
Blacksmith, boilermaker, caulker and chipper, craneman (shop), electroplater, general mechanic, ironworker, machinist, pipefitter (plumber (ship); rigger, riveter, shipfitter, shipsmith.	1.05	218.40	235.20	Machinist, fleet; and automobile machinist are included in the machinist class. For blacksmith, heavy fire; and shipsmith, heavy fire, rates see separately listed.
	.98	203.84	219.52	
	.89	185.12	199.36	
	.84	174.72	188.16	
	.79	164.32	176.96	
	.74	153.92	165.76	
Anglesmith, special	1.21			
Apprentice:				
5th class, first year	.37			
4th class, second year	.56			
3d class, third year, first 6 months	.64			
2d class, third year, second 6 months	.72			
1st class, fourth year	.82			
Battery repairman	1.13	235.04	253.12	
	1.05	218.40	235.20	
	.96	199.68	215.04	
	.91	189.28	203.84	
	.86	178.88	192.64	
Blacksmith, heavy fire	1.26			
	1.21			
Boilermaker, special	.....	.....	245.20	
Caulker (wood)	1.11			
	1.04			
	.95			
	.90			
	.85			
Coppersmith	1.13			
	1.05			
	.96			
	.91			
Diver	2.46			

Draftsman, marine:
- Chargeman ..... $410.80; $395.20; $382.20; $369.20; $356.20; $340.60.
- Grade "A" ..... $327.60; $313.30; $301.60; $286.00; $273.00.
- Grade "B" ..... $247.00; $231.40; $218.40; $205.40.
- Grade "C" ..... $176.80.
- Copyist, first-class ..... $163.80; $150.80; $137.80; $109.20.
- Copyist, second-class ..... $109.20.

	Rate.			Remarks.
	Hour.	26-day.	28-day.	
Flangeturner	$1.13	.....	.....	Five cents more than the flangeturner rate of $1.13 when working from a furnace on bending slabs.
Forger, heavy, hydraulic press	1.94			
Engineer, shop shifting engine	.....	$218.40		
Helper	.73			
	.70			
	.67			
	.64			
Inspector	.....	.....	.....	Mechanics detailed as inspectors, 8 cents more than first-class rate of their craft.

	Rate.			Remarks.
	Hour.	26-day.	28-day.	
Inspector:				
Boiler	.....	.....	$245.20	
Elevator (dual rate, $1.05 and $1.13)	.....	.....	.....	Takes top machinist rate when not employed as elevator inspector.
Finished material	.....	.....	253.12	
Scale	.....	.....	235.20	
Instrument maker	$1.13			
Instrument repairman	1.05	$218.40	235.20	
	.98	203.84	219.52	
Layer-out	.....	.....	.....	Six cents an hour more than first-class rate of his trade.
Leadburner	1.30			
Leadingman	.....	.....	.....	Twenty-four cents an hour more than first-class rate of trade supervised.
Loftsman	1.19			
Molder	1.13			
	1.05			
	.96			
	.91			
	.86			
	.81			
Painter	1.05			
	.98			
	.89			
Letterer and grainer	1.09			
Patternmaker (effective June 1, 1921)	1.42			
	1.36			
	1.29			
Pipe coverer	1.05			
Planner	1.29			
	1.13			
Progressman	.....	235.04		
Rigger	1.05	218.40	235.20	
	.98	203.84	219.52	
	.89	185.12	199.36	
	.84	174.72	188.16	
	.79	164.32	176.96	
Rivet tester	.....	.....	.....	Eight cents more than first-class riveter rate.
Roller, reclaiming plant	1.26			
Roller, assistant, reclaiming plant	.96			
Saw filer	1.32			
Sheet-metal worker	1.08			
	1.00			
	.91			
	.86			
	.81			
Shipsmith, heavy	1.26			
	1.21			
Tank tester	1.13			
Toolmaker	1.13			
	1.05			
	.96			
Typewriter and adding machine repairman	.....	203.84	235.20	
		185.12		
Welder, electric	1.08			
	1.00			
	.91			
Welder, gas	1.05			
	.98			
	.89			
Steam engineer	1.05	218.40	235.20	Pumpmen at oil plants take the first-class, 28-day rate as base; engineer and machinist, first-class rate; operator and machinist, first-class rate. Engineer of dry dock crane, $10 more than first-class 28-day rate.
(The rates for "Steam Engineer" are applicable to any engine run by steam, except steamshovels.)	.98	203.84	219.52	
	.89	185.12	199.36	
(The rates for "Operator" (wireman schedule) are applicable to any engine or equipment run by electricity.)	.84	174.72	188.16	
	.79	164.32	176.96	
	.74	153.92	165.76	

SPECIAL RATES ON BASIS OF FIRST-CLASS MACHINIST.

Operator, air compressor	$235.20
Operator, air compressor, and machinist	235.20
Foreman, corral transportation, Cristobal	261.20
Motor inspector, Fire Division	235.20

Rates for boiler inspector, scale inspector, and inspector of finished material (see above) are also special rates on basis of first-class machinist.

Approved:

JAY J. MORROW, *Governor.*

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z. (telephone 286):

Junior civil engineer; surveyor; No. 470-amended, supplemental; Engineer Department at Large has been canceled. Until further notice, examinations for these positions will be held only as the needs of the service require, and will be announced in the civil service districts in which vacancies exist.

Assistant sanitary engineer, $2,320 a year; junior sanitary engineer, $3,225 a year (male and female); vacancies exist in the United States Public Health Service, July 6, 1921.

Educational director, $1,800 to $2,400 a year; teacher, $1,600 to $2,400 a year (male and female); form 2118; announcement No. 570-amended; age, below 70 years; vacancies exist in Public Health Service hospitals in the field; October 1, 1921.[1]

Foreman mechanic, $1,800 to $2,000 a year; field manager, $2,000 a year or over (male and female); form 1312; age, below 70 years and 65 years, respectively; vacancies in Air Mail Service of Post Office Department; July 12, 1921.[1]

Manual training teacher (male and female); $900 to $1,100 a year; form 1312; age, 21 to 50 years; vacancy in Indian Service; July 20, 1921.

Plate printer (male and female); $900 to $1,000 a year; form 1800; announcement No. 296; age, 20 but not 65 years; vacancies in Hydrographic Office, Navy Department; July 5, 1921.[1]

Sound aid (male and female); $9.60 to $15.60 per diem; form 1312; announcement No. 288; age, 21 but not 70 years; vacancies at the Engineering Experiment Station, Naval Academy, Annapolis, Md., July 5, 1921.[1]

[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that date.

Official Circulars.

Stealing, Destroying, Removing, or Damaging Fruits, Trees, Plants, Shrubbery, or Growing Crops in the Canal Zone.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 9, 1921.

CIRCULAR No. 710-1:

In accordance with the Executive Order of December 5, 1912, all land in the Canal Zone has been taken over by the United States in connection with the construction, maintenance, operation, protection and sanitation of the Panama Canal, and all persons not the lawful owners, or duly licensed or acting under proper prior authorization (which may be secured from the Chief Quartermaster, the various district quartermasters, or the proper military or naval authority where the land is within military or naval posts or reservations), are cautioned, under penalty of law, against the stealing, damaging, destroying, or removing of fruits, trees, plants, shrubbery, or growing crops from established plantations or groves, as well as such fruits, trees, plants, etc., located in townsites and surrounded by enclosures, or immediately adjoining public buildings and quarters, or protected by posted prohibitory notices.

Fruit trees, plants, shrubbery, and growing crops planted by occupants of quarters within the recognized lot limits of such quarters shall be considered as belonging to the occupants, and their yield may be taken at any time and utilized at the pleasure of such occupants; *Provided, however*, that trees only may not be destroyed or removed from such premises without prior authorization.

Instructions have been issued to the Canal Zone police to enforce the provisions of this circular.

JAY J. MORROW,
Governor, The Panama Canal.
President, Panama Railroad Company.

Appointment.

THE PANAMA CANAL,
DEPT. OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., June 4, 1921.

All concerned—Effective June 6, 1921, Mr. F. E. Holleran is appointed Superintendent of the Southern Municipal District.

G. W. GREEN,
Municipal Engineer.

Approved:
C. S. RIDLEY,
Assistant Engineer of Maintenance.

Sailing of Steamship "Gen. W. C. Gorgas."

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
BALBOA HEIGHTS, C. Z., June 15, 1921.

All concerned—The steamship *General W. C. Gorgas* will sail from Cristobal for New York, via Port-au-Prince, Haiti, on Sunday, June 19, at 3 p. m., instead of on June 20 as previously announced.

S. W. HEALD,
Superintendent.

COMMISSARY NOTE.

Shoes.

Affected by the latest reduction in price are 20 items in the shoe stock carried by the commissaries. Of these, 5 are in Oxfords and 2 in bluchers for men, 8 in numbers for women, the remainder in children's styles.

All shoes included in this price revision are popular with the trade. Pumps of gun metal, patent leather and satin, Oxfords of white kid, and Russia calf bluchers may be purchased much lower than formerly, and, in the men's lines, footwear for dress and work purposes has likewise declined in price.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates, domestic, $1.00 per year; foreign, $1.50; address The Panama Canal Record, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Volume XIV. Balboa Heights, C. Z., June 22, 1921. No. 45.

Special Panama Canal Commission.

Brig. Gen. Wm. D. Connor, U. S. A., Chairman of the Special Panama Canal Commission, made the following statement, June 20:

My associates and I have been designated by the Secretary of War a Special Panama Canal Commission to report upon existing conditions relating to the care, maintenance, sanitation, operation, and government of The Panama Canal and Canal Zone, including all matters affecting the Panama Railroad and the Panama Railroad Steamship Line, and to make recommendations relative to any changes in such conditions affecting the organization, government, and operation of The Panama Canal and Canal Zone, and the operations of the Panama Railroad Company, which we may deem advisable.

The Secretary of War appreciates the gigantic task that has been accomplished in the construction of the Canal and the splendid results that have been obtained, and fully realizes its enormous importance to the United States and to the world at large. He desires to visit the Canal himself and, in all probability will do so as soon as his other duties permit, but in the meantime he is forced to act daily on questions vitally affecting the Canal Zone, and its population.

For this reason he has selected this Commission to visit the Isthmus, and stay here long enough to absorb the local atmosphere and become thoroughly familiar with the major problems involved in the administration of the Canal. We arrive on the Isthmus without any preconceived ideas and with open minds, and shall remain in the Zone as long as necessity dictates. We feel that we need the cooperation of the officials and employees of The Panama Canal and railroad to assist us in a thorough understanding of the economic conditions that now exist, or may be reasonably anticipated. In order that our knowledge may be as complete as possible, we will welcome constructive criticisms and suggestions from any individuals or associations that may desire to submit their views on local conditions. Those desiring hearings are requested to communicate with the Secretary, Special Panama Canal Commission, Room 302, Administration Building, Balboa Heights, C. Z., as soon as practicable.

The Special Commission arrived on the U. S. A. T. *Cantigny* on June 18. It is composed of General Connor, Chairman; Capt. Alfred Brooks Fry, U. S. N. R.; Mr. H. P. Wilson; Mr. F. A. Molitor. The Secretary of the Commission is Mr. E. H. Van Fossan. Mr. M. T. McDermott is assistant to Mr. Molitor; Mr. Charles Maass assistant to Mr. Wilson; and Mr. John V. Hazard is stenographer to the Commission.

Address mail for the Commission to "Drawer S, Balboa Heights."

CANAL WORK IN MAY.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of May, 1921:

BALBOA HEIGHTS, C. Z., June 18, 1921.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of The Panama Canal for the month of May, 1921:

CANAL TRAFFIC.

The total number of vessels and craft of all kinds through the Canal as compared with the preceding month, and with the corresponding month of last year, was as follows:

	May, 1921.	April, 1921.	May, 1920.
Commercial vessels	210	227	226
United States Government vessels	30	27	8
Launches (under 10 tons)	6	9	3
Total vessels and craft through Canal	246	263	237

COMMERCIAL TRAFFIC.[1]

A comparison of this month's commercial traffic with that of the preceding month, of the corresponding month of 1920, and of the average month's traffic for the past 12 months, shows the following:

Panama Canal net tonnage:	
May, 1921	864,617
April, 1921	955,503
May, 1920	852,425
Average month for the past year	946,593
Registered gross tonnage:	
May, 1921	1,092,602
April, 1921	1,203,087
May, 1920	1,081,462
Average month for the past year	1,206,880
Registered net tonnage:	
May, 1921	692,747
April, 1921	757,576
May, 1920	694,941
Average month for the past year	701,974
Tolls earned:	
May, 1921	$835,882.77
April, 1921	927,977.09
May, 1920	834,428.64
Average month for the past year	946,612.84
Tons of cargo carried:	
May, 1921	792,735
April, 1921	907,613
May, 1920	974,919
Average month for the past year	989,951

[1] Commercial traffic includes all vessels of 10 tons or more transiting the Canal, with the exception of vessels owned by the United States Government, or chartered by the Government to carry Government supplies.

Ocean-going commercial vessels passing through the Canal averaged 6.8 ships per day. The average tonnage, tolls, and tons of cargo carried, per commercial vessel, as compared with last month's traffic, were as follows:

Average per vessel.	This month.	Last month.
United States equivalent net tonnage	3,309	3,397
Panama Canal net tonnage	4,117	4,209
Registered gross tonnage	5,203	5,299
Registered net tonnage	3,299	3,337
Tolls	$3,980.39	$4,088.01
Tons of cargo (all vessels)	3,775	3,998
Tons of cargo (laden vessels only)	4,086	4,561

TOLLS PAID PER CARGO TON BY NATIONALITY OF VESSELS.

The average rate of tolls paid on each ton (2,240 pounds) of cargo passing through the Canal from the Atlantic to the Pacific was $1.06 per ton, and from the Pacific to the Atlantic $0.89 per ton, with a general average of $0.97 per ton. The average rate paid per cargo ton, by nationality of vessels, is shown in the following statement:

	Atlantic to Pacific.	Pacific to Atlantic.	General average.
British	$1.46	$1.08	$1.24
Chilean	4.05	2.56	2.95
Danish	1.37	.60	.69
Dutch	.74	.90	.87
French	11.17	.87	1.32
German	2.15	.....	2.15
Italian	2.13	.....	2.13
Japanese	1.33	1.52	1.36
Norwegian	.72	.96	.77
Peruvian	1.12	.73	.98
Swedish	1.16	.....	1.16
United States	.80	.79	.80
Average rate all ships, May, 1921	1.057	.895	.973
Average rate all ships, April, 1921	.936	.915	.926

The difference in the rate of tolls paid per cargo ton, by vessels of different nationalities, is due to some vessels being but lightly loaded while others are carrying practically capacity cargoes. This also accounts for the variation in the rates per cargo ton as between northbound and southbound cargo for ships of the same nationality.

In the computation of the rate of tolls paid per cargo ton, as shown above, only the tolls paid on laden cargo vessels have been considered.

The lowest rate of tolls paid per cargo ton by any vessel passing through the Canal during the month, was paid by the steamship *North America*, flying the British flag, bound from Iquique to Savannah, and carrying 3,250 tons of nitrate, on which tolls of $1,495 were assessed, or a rate of 46 cents per cargo ton.

COMMODITY STATISTICS.

A classification of all cargo passing through the Canal, by commodities, giving the origin and destination of the same, has been previously compiled and was published in THE PANAMA CANAL RECORD, under date of June 15, 1921. A brief summary of the principal items is shown herewith:

CARGO PASSING FROM ATLANTIC TO PACIFIC.

Commodity.	Tons.	Per cent of total cargo.	
		This month	Last month
Oils:			
Crude	87,720	35.4	32.0
Refined	47,371		
Manufactured goods:			
Iron and steel	51,824	20.4	20.5
Machinery	9,416		
Other	16,461		
Coal and coke	26,096	6.8	8.0
Sulphur	10,500	2.7	1.5
Cotton, raw	9,514	2.4	0.6
Tobacco	3,168	0.9	0.7
Other and general cargo	119,253	31.4	36.7

CARGO PASSING FROM PACIFIC TO ATLANTIC.

Wheat	91,620	22.3	10.0
Nitrate	43,504	10.6	30.0
Sugar	41,571	10.1	2.0
Lumber	31,099	7.5	5.0
Cold storage and food products	34,146	8.3	11.0
Flour	27,186	6.6	4.0
Wool	15,125	3.7	4.0
Metals (copper)	11,289	2.7	3.0
Ores	11,086	2.7	3.5
Fruits (fresh and dried)	8,319	2.0	0.7
Coffee	9,476	2.3	1.9
Canned goods	10,116	2.5	3.0
Barley	7,294	1.8	3.0
Cacao	4,260	1.0	0.3
Rice	4,901	1.2	.....
Other and general	60,420	14.7	.....

UNITED STATES COASTWISE TRAFFIC.

The number of vessels engaged in the United States coastwise traffic together with their tonnage, tolls, and tons of cargo carried, as compared with the preceding months of the calendar year, was as follows:

	Atlantic to Pacific.				Pacific to Atlantic.			
	No. of ships.	P. C. net tonnage.	Tolls.	Tons of cargo.	No. of ships.	P. C. net tonnage.	Tolls.	Tons of cargo.
January	17	88,086	$91,390.00	76,593	16	62,765	$64,343.59	81,336
February	15	80,940	79.169.20	67,302	17	66,043	66,703.70	68,345
March	16	71,770	75,338.65	55,111	11	61,804	64,470.64	52,289
April	19	92,033	94,185.00	94,484	14	68,368	65,523.74	59,306
May	19	82,257	84,545.85	90,617	16	75,593	72,813.55	93,242

UNITED STATES SHIPPING BOARD VESSELS.

The number of vessels under control of the United States Shipping Board passing through the Canal, together with their Panama Canal net tonnage, tolls, and tons

of cargo carried, as compared with preceding months of the calendar year, was as follows:

	Atlantic to Pacific.				Pacific to Atlantic.			
	No. of ships.	P. C. net tonnage.	Tolls.	Tons of cargo.	No. of ships.	P. C. net tonnage.	Tolls.	Tons of cargo.
January	14	59,738	$64,769.85	70,058	23	96,877	$93,268.29	98,075
February	8	41,024	42,951.75	35,018	20	96,441	94,082.01	108,285
March	18	94,823	96,782.80	83,978	8	34,066	31,378.00	30,025
April	13	61,176	61,590.00	60,231	12	56,049	53,162.18	52,908
May	9	39,614	40,180.00	48,489	21	97,257	92,380.47	114,107

TRAFFIC BY TRADE ROUTES.

Statements attached to this report show the origin and destination of all cargo passing through the Canal as accurately as the same can be segregated from the data available (*see* pages 714 and 715). Below is given a summary of the traffic passing over the principal trade routes, showing the number of vessels, the Panama Canal net measurement, and the amount of cargo carried. The vessels shown as in ballast represent cargo-carrying ships only—warships, tugs, yachts, etc., not being included as "ballast."

Trade routes.	Total vessels.			Vessels in balllast.	
	Number.	Panama Canal net tonnage.	Cargo.	Number.	Panama Canal net. tonnage.
Atlantic to Pacific.					
United States coastwise	19	82,257	90,617	.....	.....
East coast of United States to Far East	16	76,114	82,537	.....	.....
East coast of United States to west coast of South America	11	36,887	25,942	.....	.....
Europe to west coast of South America	9	34,972	17,247	.....	.....
Cristobal to west coast of South America	9	15,354	2,302	1	69
British Isles to Australasia	7	47,451	23,101	.....	.....
United States to Australasia	6	29,360	31,488	.....	.....
Europe to west coast of United States	4	19,986	7,522	1	6,612
Mexico to west coast of United States	4	21,246	41,829	.....	.....
Cristobal to Central America	4	3,656	672	2	2,046
Mexico to west coast of South America	3	15,308	29,012	.....	.....
Cristobal to west coast of United States	1	1,602	561	.....	.....
Miscellaneous trade routes	7	30,236	28,493	2	5,113
Totals, Atlantic to Pacific, May, 1921	100	414,429	381,323	6	13,840
Totals, Atlantic to Pacific, April, 1921	118	492,506	500,801	9	26,755
Totals, Atlantic to Pacific, May, 1920	105	388,990	418,678	13	46,486
Pacific to Atlantic.					
United States coastwise	16	75,593	93,242	.....	.....
West coast of South America to east coast of United States	16	42,873	50,597	.....	.....
West coast of United States to Europe	15	74,933	112,892	.....	.....
Australasia to Europe	10	76,211	51,163	.....	.....
West coast of South America to Europe	10	41,831	49,546	.....	.....
West coast of South America to Cristobal	10	16,272	7,294	.....	.....
West coast of South America to Mexico	7	36,282	.....	7	36,282
Central America to Cristobal	5	3,675	4,824	.....	.....
West coast of United States to Mexico	4	19,794	.....	4	19,794
Far East to east coast of United States	3	12,407	9,883	.....	.....
West coast of Canada to east coast of Mexico	2	12,417	.....	2	12,417
West coast of Canada to Europe	2	8,573	15,165	.....	.....
West coast of Canada to Egypt	2	8,176	8,417	.....	.....
Australasia to east coast of United States	1	4,875	370	.....	.....
West coast of United States to Cristobal	1	1,602	1,515	.....	.....
Miscellaneous trade routes	6	14,674	6,504	2	6,926
Totals, Pacific to Atlantic, May, 1921	110	450,188	411,412	15	75,419
Totals, Pacific to Atlantic, April, 1921	109	462,997	406,812	19	85,263
Totals, Pacific to Atlantic, May, 1920	119	463,435	556,241	12	59,190

LATIN-AMERICAN TRAFFIC.

The number of vessels, tonnage, and tons of cargo carried by the vessels engaged in the Latin-American traffic, classified by nationality, were as follows:

ATLANTIC TO PACIFIC.

Nationality.	No. of vessels	TONNAGE. United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
United States	12	37,841	45,304	61,152	37,657	$47,297.55	65,823
British	18	31,670	43,356	56,908	33,036	38,756.70	17,663
Norwegian	4	14,237	16,421	22,555	14,250	17,796.25	28,360
Peruvian	3	6,832	10,575	14,897	8,524	8,540.00	7,602
Italian	2	6,410	7,886	11,226	6,728	8,012.50	3,614
Japanese	1	5,513	6,385	9,049	6,502	6,891.25	7,879
French	1	4,326	4,363	5,923	3,763	5,235.60	468
Dutch	1	1,603	3,057	2,655	1,625	2,003.75	2,690
Chilean	1	1,463	2,577	2,553	1,600	1,828.75	452
German	1	1,225	1,320	1,928	1,136	1,531.25	711
Totals	44	111,120	141,244	188,846	114,821	137,893.60	135,262
April, 1921	58	147,700	188,679	241,751	151,087	182,232.50	197,113
May, 1920	63	.....	195,469	252,744	160,718	.....	161,163

PACIFIC TO ATLANTIC.

United States	19	57,320	69,262	89,503	56,723	$58,779.29	40,140
British	23	48,880	61,256	86,148	49,978	55,615.03	46,937
Norwegian	7	19,498	22,435	29,932	18,926	18,621.83	8,028
French	2	7,166	8,227	11,446	7,281	8,957.50	10,303
Chilean	2	3,274	5,759	6,351	3,872	4,092.50	1,557
Peruvian	2	2,495	5,356	8,049	4,187	3,118.75	4,293
Japanese	1	5,513	6,385	9,049	6,502	4,597.20	.....
Danish	1	2,771	3,484	4,358	2,771	3,463.75	4,978
Totals	57	146,917	182,164	238,836	150,240	157,245.85	116,236
April, 1921	62	173,766	212,587	280,957	173,393	192,143.57	160,873
May, 1920	77	.....	276,631	354,709	226,752	.....	343,582

CLASSIFICATION OF COMMERCIAL TRAFFIC.[1]

A statement of this month's commercial traffic, classified (1) according to the nationality of the various ships passing through the Panama Canal and (2) segregating laden and unladen vessels, is shown in the following tabulations:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Number and nationality of commercial vessels passing through the Panama Canal:			
British	36	39	75
Chilean	1	2	3
Danish	1	3	4
Dutch	2	1	3
French	1	2	3
German	1	.....	1
Italian	2	.....	2
Japanese	8	2	10
Norwegian	5	7	12
Peruvian	3	2	5
Swedish	2	.....	2
United States	38	52	90
Totals, May, 1921	100	110	210
Totals, April, 1921	118	109	227
Totals, May, 1920	105	119	224
United States equivalent net tonnage of commercial vessels passing through the Panama Canal, by nationality:			
British	119,427	128,356	247,783
Chilean	1,463	3,274	4,737
Danish	3,244	10,829	14,073
Dutch	7,006	6,852	13,858
French	4,326	7,166	11,492
German	1,225	.....	1,225
Italian	6,410	.....	6,410

[1] Commercial traffic includes all ocean-going vessels transiting the Canal, excepting vessels owned or chartered by the United States Government.

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
United States equivalent net tonnage of commercial vessels passing through the Panama Canal, by nationality.—Continued.			
Japanese	33,776	10,434	44,210
Norwegian	17,290	19,498	36,788
Peruvian	6,832	2,495	9,327
Swedish	6,099	.....	6,099
United States	127,796	171,098	298,894
Totals, May, 1921	334,894	360,002	694,896
Totals, April, 1921	397,568	373,548	771,116
Totals, May, 1920	314,728	379,867	694,595
Panama Canal net tonnage of commercial vessels passing through the Panama Canal, by nationality:			
British	148,378	162,197	310,575
Chilean	2,577	5,759	8,336
Danish	4,016	13,490	17,506
Dutch	9,669	6,961	16,630
French	4,363	8,227	12,590
German	1,320	.....	1,320
Italian	7,886	.....	7,886
Japanese	39,323	12,014	51,337
Norwegian	20,307	22,435	42,742
Peruvian	10,575	5,356	15,931
Swedish	9,561	.....	9,561
United States	156,454	213,749	370,203
Totals, May, 1921	414,429	450,188	864,617
Totals, April, 1921	492,506	462,997	955,503
Totals, May, 1920	388,990	463,435	852,425
Registered gross tonnage of commercial vessels passing through the Panama Canal, by nationality:			
British	187,664	200,376	388,040
Chilean	2,553	6,351	8,904
Danish	5,219	17,074	2,293
Dutch	11,039	9,065	20,104
French	5,923	11,446	17,369
German	1,928	.....	1,928
Italian	11,226	.....	11,226
Japanese	52,772	16,819	69,591
Norwegian	27,449	29,932	57,381
Peruvian	14,897	8,049	22,946
Swedish	9,996	.....	9,996
United States	198,742	264,082	462,824
Totals, May, 1921	529,408	563,194	1,092,602
Totals, April, 1921	615,818	587,269	1,203,087
Totals, May, 1920	490,765	590,697	1,081,462
Registered net tonnage of commercial vessels passing through the Panama Canal, by nationality:			
British	115,593	125,819	241,412
Chilean	1,600	3,872	5,472
Danish	3,337	10,824	14,161
Dutch	7,062	6,871	13,933
French	3,763	7,281	11,044
German	1,136	.....	1,136
Italian	6,728	.....	6,728
Japanese	34,114	11,323	45,437
Norwegian	17,304	18,926	36,230
Peruvian	8,524	4,187	12,711
Swedish	7,686	.....	7,686
United States	127,475	169,322	296,797
Totals, May, 1921	334,322	358,425	692,747
Totals, April, 1921	391,141	366,435	757,576
Totals, May, 1920	315,284	379,657	694,941
Tolls levied against commercial vessels passing through the Panama Canal, by nationality:			
British	$146,081.20	$154,960.03	$301,041.23
Chilean	1,828.75	4,092.50	5,921.25
Danish	4,055.00	13,536.25	17,591.25
Dutch	6,764.39	8,491.20	15,255.59
French	5,235.60	8,957.50	14,193.10

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Tolls levied against commercial vessels passing through the Panama Canal, by nationality—Continued:			
German	$1,531.25	.....	$1,531.25
Italian	8,012.50	.....	8,012.50
Japanese	42,053.75	$10,748.45	52,802.20
Norwegian	21,612.50	18,621.83	40,234.33
Peruvian	8,540.00	3,118.75	11,658.75
Swedish	7,623.75	.....	7,623.75
United States	159,595.40	200,422.17	360,017.57
Totals, May, 1921	412,934.09	422,948.68	835,882.77
Totals, April, 1921	490,505.91	437,471.18	927,977.09
Totals, May, 1920	382,267.59	452,161.05	834,428.64
Tons of cargo carried by commercial vessels passing through the Panama Canal, by nationality:			
British	96,603	133,614	230,217
Chilean	452	1,557	2,009
Danish	2,955	22,576	25,531
Dutch	2,690	9,409	12,099
French	468	10,303	10,771
German	711	.....	711
Italian	3,614	.....	3,614
Japanese	31,475	4,035	35,510
Norwegian	29,989	8,028	38,017
Peruvian	7,602	4,293	11,895
Swedish	6,567	.....	6,567
United States	198,197	217,597	415,794
Totals, May, 1921	381,323	411,412	792,735
Totals, April, 1921	500,801	406,812	907,613
Totals, May, 1920	418,678	556,241	974,919
A further classification of the above commercial traffic:			
Cargo-carrying vessels:			
Laden	94	94	188
Ballast	6	15	21
Yacht	.....	1	1
Total commercial vessels	100	110	210
Net tonnage of above, Panama Canal measurement:			
Cargo-carrying vessels:			
Laden	400,589	374,597	775,186
Ballast	13,840	75,419	89,259
Yacht	.....	172	172
Total Panama Canal net tonnage	414,429	450,188	864,617
Tolls paid on above ships:			
Cargo-carrying vessels—			
Laden	$408,173.45	$368,336.65	$776,510.10
Ballast	4,760.64	54,483.03	59,243.67
Yacht	.....	129.00	129.00
Total tolls	412,934.09	422,948.68	835,882.77
Motor ships through the Canal	5	6	11
Panama Canal net tonnage of above	17,919	16,099	34,018
Sailing vessels through the Canal	1	1	2
Panama Canal net tonnage of above	2,008	456	2,064
Cargo carried by commercial vessels ..... tons	381,323	411,412	792,735
Average tolls per ton of cargo [1]	$1.08	$1.03	$1.05
Average tolls per ton of cargo [2]	1.06	.89	.97

[1] Including cargo-carrying ships in ballast. [2] Laden vessels only.

CLASSIFICATION OF NONCOMMERCIAL TRAFFIC.[1]

The following statement shows the tonnage of, and amount of cargo carried by United States Government vessels through the Canal during the month of May,

[1] Vessels, barges, tugs, launches, etc., in the service of The Panama Canal are not included in this statement of traffic.

1921. This traffic passes through the Canal free of tolls; if tolls had been assessed against these vessels at commercial rates, the amounts collected would have been as indicated below.

There is also included in this statement the number and tonnage of launches transiting the Canal, together with tolls collected thereon. Although paying tolls they are included in the noncommercial traffic, being small nonseagoing vessels under 10 tons measurement.

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
United States Navy vessels:			
Gunboats	2	3	5
Tugs	2	1	3
Ammunition ship	1	.....	1
Subtender	1	.....	1
Submarines	15	1	16
Submarine chasers	1	2	3
Totals	22	7	29
United States Army vessels:			
Mine planter	.....	1	1
Tonnage of above vessels:			
Displacement tonnage—			
Naval vessels	32,288	5,560	37,848
Panama Canal net tonnage:			
Army vessels	.....	403	403
Cargo carried by above vessels:			
Naval vessels	4,000	.....	4,000
Total cargo through Canal free of tolls	4,000	.....	4,000
Tolls that would accrue from above, computed at rates for commercial vessels:			
Naval vessels	$16,144.00	$2,780.00	$18,924.00
Army vessels	.....	290.16	290.16
Totals	$16,144.00	$3,070.16	$19,214.16
Launches through the Canal	3	3	6
Net tonnage of above, Panama Canal measurement	16	22	38
Tolls collected on above	$16.50	$15.30	$31.80

STATEMENT OF OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Canal are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Vessels passing through the Canal:			
Commercial	100	110	210
United States Government vessels	22	8	30
Launches (under 10 tons)	3	3	6
Total vessels and craft	125	121	246
Tonnage of above vessels:			
Panama Canal net measurement—			
Commercial vessels	414,429	450,188	864,617
United States Government vessels	.....	403	403
Launches	16	22	38
Displacement tonnage—			
United States Government vessels	32,288	5,560	37,848
Cargo carried by above vessels:			
Commercial ....tons..	381,323	411,412	792,735
United States Government ....tons..	4,000	.....	4,000
Total cargo through the Canal ....tons..	385,323	411,412	796,735
Deck cargo included in the above ....tons..	477	2,157	2,634
Vessels entering port but not transiting Canal:			
Number entering	51	8	59
Number clearing	50	8	58
Registered gross tonnage of above:			
Entering	219,547	29,172	248,719
Clearing	219,801	28,972	248,773
Registered net tonnage of above:			
Entering	132,175	19,224	151,399
Clearing	132,070	19,964	152,034

	Cristobal.	Balboa.	Total.
Vessels transiting Canal and handling passengers or cargo at port:			
Number entering	51	52	103
Number clearing	51	51	102
Registered gross tonnage of above:			
Entering	227,680	180,901	408,581
Clearing	225,606	176,496	402,102
Registered net tonnage of above:			
Entering	142,925	106,898	249,823
Clearing	141,311	104,808	246,119
All vessels entering and clearing, including those transiting the Canal:			
Number entering	260	234	494
Number clearing	261	221	482
Registered gross tonnage of above:			
Entering	1,315,553	1,137,315	2,452,868
Clearing	1,321,107	1,122,074	2,443,181
Registered net tonnage of above:			
Entering	838,395	726,207	1,564,602
Clearing	840,119	716,417	1,556,536
Transit cargo arriving ... tons	783,000	801,860	1,584,860
Transit cargo clearing ... tons	787,647	806,534	1,594,181
Local cargo arriving ... tons	41,150	13,423	54,573
Local cargo shipped ... tons	1,564	329	1,893
Cargo received for transshipment ... tons	24,503	327	24,830
Cargo transshipped ... tons	19,145	.....	19,145
Cargo handled by Receiving and Forwarding Agent, Panama Railroad:			
Received ... tons	32,245	3,719	35,964
Dispatched ... tons	18,497	4,911	23,408
Rehandled ... tons	951	493	1,444
Stevedored ... tons	14,802	1,521	16,323
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad	72	9	81
Panama Railroad vessels	2	.....	2
United States Army vessels	3	1	4
Total vessels supplied with bunker coal	77	10	87
Coal supplied to above vessels:			
Commercial, other than Panama Railroad ... tons	33,545	818	34,363
Panama Railroad vessels ... tons	691	.....	691
United States Army vessels ... tons	84	1	85
Total coal supplied to vessels ... tons	34,320	819	35,139
Coal issues, miscellaneous:			
Panama Canal departments ... tons	938	149	1,087
Panama Railroad departments ... tons	646	.....	646
United States Army, excepting vessels ... tons	202	.....	202
Individuals and companies ... tons	359	.....	359
Total coal furnished from Panama Canal deposits ... tons	36,465	968	37,433
Coal on hand, June 1, 1921 ... tons	140,553	21,139	161,692
Coal on hand, May 1, 1921 ... tons	177,018	22,107	199,125
United States Navy coal account.			
Issued to United States Navy, including vessels ... tons	230	1,831	2,061
Coal on hand, June 1, 1921 ... tons	64,334	17,320	81,654
Coal on hand, May 1, 1921 ... tons	64,564	19,151	83,715
Vessel supplied with fuel oil from Panama Canal tanks	.....	1	1
Fuel oil supplied to above vessel ... bbls	.....	315	315
Fuel oil issues, miscellaneous:			
To Panama Canal departments ... bbls	7,735	19,648	27,383
To Panama Railroad ... bbls	153	.....	153
To Army and Navy ... bbls	204	267	471
Transferred to pipe line ... bbls	793	.....	793
Total issues from Panama Canal tanks ... bbls	8,885	20,230	29,115
Fuel oil on hand, June 1, 1921 ... bbls	97,423	86,542	183,965
Fuel oil on hand, May 1, 1921 ... bbls	106,308	46,962	153,270
Fuel oil received during the month ... bbls	.....	59,810	59,810

	Cristobal.	Balboa.	Total.
Diesel oil issues during the month.....bbls..	956	.....	956
Transferred to pipe line.....bbls..	206	.....	206
Diesel oil on hand, June 1, 1921.....bbls..	51,994	1,026	53,020
Diesel oil on hand, May 1, 1921.....bbls..	53,156	1,026	54,182
Fuel oil pumped for individuals and companies at 4 cents per barrel.bbls..	276,859	128,745	405,604
Miscellaneous transfers.....bbls..	.....	306	306
Total oil handled.....bbls..	286,906	149,281	436,187
Vessels furnished with commissary supplies:			
Commercial, other than Panama Railroad.....	116	59	175
Panama Railroad.....	8	1	9
United States Government.....	11	20	31
Total vessels furnished supplies.....	135	80	215
Commissary sales to commercial vessels:			
Ice.....	$2,850.68	$663.53	$3,514.21
Wholesale groceries.....	4,292.39	3,170.67	7,463.06
Cold storage.....	18,871.59	9,358.01	28,229.60
Laundry.....	2,772.96	1,432.24	4,205.20
Miscellaneous.....	1,519.47	382.20	1,901.67
Total sales to commercial vessels.....	30,307.09	15,006.65	45,313.74
Commissary sales to Panama Railroad vessels:			
Ice.....	$82.80	.....	$82.80
Wholesale groceries.....	906.27	.....	906.27
Cold storage.....	3,562.52	.....	3,562.52
Laundry.....	773.79	.....	773.79
Miscellaneous.....	476.06	$19.78	494.84
Total sales to Panama Railroad vessels.....	5,800.44	19.78	5,820.22
Commissary sales to United States Government vessels:			
Ice.....	$485.93	$284.63	$770.56
Groceries.....	436.27	4,274.05	4,710.32
Cold storage.....	2,324.30	8,819.69	11,143.99
Laundry.....	214.64	1.22	215.86
Miscellaneous.....	662.34	152.38	814.72
Total sales to Government vessels.....	4,123.48	13,531.97	17,655.45
Total commissary sales to all vessels:			
May, 1921.....	$40,231.01	$28,558.40	$68,789.41
April, 1921.....	51,218.09	31,187.64	82,405.73
May, 1920.....	105,216.10	60,330.60	165,546.70
Admeasurement certificates:			
United States equivalent issued or made.....	16	6	22
Measured for Panama Canal.....	7	14	21
United States equivalent or Panama Canal corrected.....	22	9	31
Services of harbor equipment:			
Tugs, total operating hours.....	518	352	870
Launches, total operating hours.....	1,354	1,217	2,571
Vessels repaired at Panama Canal shops:			
Commercial—			
Steamships.....	37	13	50
Motor ships.....	1	2	3
Schooners.....	1	1	2
Battleship.....	.....	1	1
Yacht.....	.....	1	1
Total commercial.....	39	18	57
Noncommercial—			
Tugs.....	6	1	7
Submarines.....	7	.....	7
Battleship.....	.....	1	1
Cruiser.....	.....	1	1
Submarine chaser.....	.....	1	1
Dredge.....	1	.....	1
Launches.....	3	.....	3
Submarine tender.....	1	.....	1
Total noncommercial.....	18	4	22
Vessels dry-docked:			
Steamships.....	2	2	4
Schooner.....	1	.....	1
Motor ship.....	1	.....	1
Barges.....	2	.....	2
Battleship.....	.....	1	1
Cruiser.....	.....	1	1
Tug.....	.....	1	1
Subchaser.....	1	.....	1
Total vessels dry-docked.....	7	5	12

	Cristobal.	Balboa.	Total.
Services to American vessels:			
Crews shipped	1	.....	1
Crews paid off	1	.....	1
Shipping articles written	1	1	2
Article closed	.....	1	1
Marine protests noted	17	5	22
Services to American seamen:			
Seamen shipped	214	97	311
Seamen discharged	147	103	250
Seaman deceased	1	.....	1
Seamen deserted	5	14	19
Seamen lodged and subsisted	25	9	34
Seamen repatriated	22	4	26
Wages of American seamen:			
Total wages earned	$10,420.93	$7,291.61	$17,712.54
Deductions approved by Deputy Shipping Commissioner	1,558.18	2,298.71	3,856.88
Balance due seamen	8,862.75	4,992.90	13,855.65
Paid to seamen	7,123.67	4,343.15	11,466.82
Received on deposit for seamen	1,739.08	649.75	2,388.83
Clearances issued	144	104	248
Bills of health issued	146	112	258
Movements of passengers.			
Disembarking at Canal ports:			
First class—			
From Atlantic ports	596	3	599
From Pacific ports	236	204	440
Total, first class	832	207	1,039
Other than first class—			
From Atlantic ports	805	.....	805
From Pacific ports	73	386	459
Total, other than first class	878	386	1,264
Total disembarking at Canal ports	1,710	593	2,303
Embarking from Canal ports:			
First class—			
For Atlantic ports	1,400	5	1,405
For Pacific ports	101	104	205
Total, first class	1,501	109	1,610
Other than first class—			
For Atlantic ports	886	.....	886
For Pacific ports	35	49	84
Total, other than first class	921	49	970
Total embarking from Canal ports	2,422	158	2,580
Remaining on board vessels:			
First class—			
Bound from Atlantic to Pacific ports	380	426	806
Bound from Pacific to Atlantic ports	800	1,025	1,825
Bound from Atlantic to Atlantic ports	283	.....	283
Bound from Pacific to Pacific ports	.....	28	28
Total, first class	1,463	1,479	2,942
Other than first class—			
Bound from Atlantic to Pacific ports	279	280	559
Bound from Pacific to Atlantic ports	765	841	1,606
Bound from Atlantic to Atlantic ports	89	.....	89
Bound from Pacific to Pacific ports	.....	347	347
Total, other than first class	1,133	1,468	2,601
Total remaining on board	2,596	2,947	5,543
Total passengers arriving	4,306	3,540	7,846
Total passengers departing	5,018	3,105	8,123
Departures in excess of arrivals	712	.....	.....
Arrivals in excess of departures	.....	435	.....
Net excess of departures	.....	.....	277

LOCK OPERATION.

The following tabulations give the number of lockages, vessels through the locks, and the consumption of water for lockages, for the month of May, 1921. in comparison with that of the preceding month, and of the corresponding month of last year.

NUMBER OF LOCKAGES.

	Commercial.			Noncommercial.			Grand total.
	North.	South.	Total.	North.	South.	Total.	
Gatun	104	89	193	4	9	13	206
Pedro Miguel	108	97	205	14	19	33	238
Miraflores	109	98	207	12	18	30	237
Total lockages, May, 1921	321	284	605	30	46	76	681
Total lockages, April, 1921	325	351	676	39	45	84	760
Total lockages, May, 1920	347	298	645	.....	.....	74	719

NUMBER OF VESSELS PUT THROUGH THE LOCKS.

	Commercial.			Noncommercial.			Grand total.
	North.	South.	Total.	North.	South.	Total.	
Gatun	113	103	216	16	30	46	262
Pedro Miguel	112	100	212	29	43	72	284
Miraflores	113	101	214	30	46	76	290
Total vessels, May, 1921	338	304	642	75	119	194	836
Total vessels, April, 1921	339	373	712	110	109	219	931
Total vessels, May, 1920	364	320	684	.....	.....	170	854

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels	32	33	35
Canal equipment	14	39	41
Total noncommercial vessels	46	72	76

The consumption of water for lockages, loss in leakage, and for maintenance, was as follows:

	Gatun.	Pedro Miguel.	Miraflores.
	Cubic feet.	*Cubic feet.*	*Cubic feet.*
Lockages	795,200,000	716,720,000	703,260,000
Leakages	20,000,000	10,670,000	59,000,000
Maintenance	.....	28,460,000	8,730,000
Total consumption, May, 1921	815,200,000	755,850,000	770,990,000
Total consumption, April, 1921	911,560,000	837,920,000	822,850,000
Total consumption, May, 1920	808,940,000	776,480,000	760,630,000

METEOROLOGY AND HYDROGRAPHY.

The rainfall for the month was generally below normal everywhere except on the Pacific and Atlantic coasts. Totals in the Canal Zone and immediate vicinity ranged from 3.79 inches at Cucherbo to 14.08 inches at Gatun. The greatest amount of precipitation recorded on any one day was 4.30 inches at Colon on the 23d.

The estimated rainfall over the Gatun Lake watershed was 9.15 inches, compared with a 11-year mean of 11.65 inches; while over the Chagres River watershed area above Alhajuela, it was 11.47 inches, as compared with a 20-year mean of 12.44 inches.

The discharge of the Chagres River at Alhajuela was 1,091 c. f. s., being 51 per cent below the 20-year May mean of 2,232 c. f. s., and furnished 40 per cent of the Gatun Lake total yield. The maximum momentary discharge was 8,400 c. f. s. at elevation 96.18 feet on the 21st, and the minimum flow was 356 c. f. s. on the 12th. Two small rises of less than 5 feet occurred at Alhajuela on the 17th and 21st, respectively.

The Gatun Lake watershed total yield was 2,738 c. f. s., being 44 per cent below the 11-year May mean of 4,861 c. f. s. The maximum total yield for the month of May was 8,665 c. f. s. in 1918. The net yield for the month was 2,109 c. f. s. The

lake varied in elevation from 82.62 feet on the 31st to elevation 82 on the 21st. The lake neither gained nor lost storage for the month, the elevation being 82.59 feet midnight on both April 30 and May 31.

The draft on the lake for lockages and power was 2,056 c. f. s., as compared with 2,282 c. f. s. for last month, and 1,488 c. f. s. for May, 1920. The ratio of water used for power and lockages was 2.63 to 1. The consumption of 1,490 c. f. s. at the hydroelectric plant is the highest on record for the month of May, and the lowest for the past 12-month period. There were no spillway operations at Gatun.

The Gamboa pumping plant and Brazos Brook reservoir drew 39.7 and 38.5 million cubic feet, respectively, from the lake, and 25 million cubic feet were transferred through Pedro Miguel locks for the maintenance of Miraflores Lake surface elevation.

Miraflores Lake varied from a maximum elevation of 54.13 feet on the 27th to a minimum elevation of 53 feet on the 2d, averaged 53.54 feet, and ended at 53.70 feet midnight the 31st.

Seismic disturbances were recorded on the 1st, 16th, and 25th, all of which were of a very slight intensity and of a local nature.

Temperature records for the month were as follows:

Station.	Maximum.	Minimum.
Balboa Heights	91	70
Gamboa	93	71
Alhajuela	92	64
Gatun	89	71
Colon	91	72

The following table gives a comparison of the monthly rainfall by sections for May, 1920, and May, 1921:

Section.	Rainfall.		Rainy days.	
	1921.	1920.	1921.	1920.
	Inches.	*Inches.*		
Pacific	7.85	4.95	19	12
Central	7.15	6.88	19	12
Atlantic	13.18	4.54	20	14

ELECTRICAL DIVISION.

The combined gross output of the Gatun hydroelectric station and of the Miraflores steam plant, the power distributed to consumers, the loss of power in transmission, etc., is shown in the following tabulations:

	May, 1921.	April, 1921.	May, 1920.
Gross output, KWH:			
Gatun hydroelectric station	5,316,900	5,660,900	3,027,400
Miraflores steam plant	2,350	39,290	2,300,440
Combined output	5,319,250	5,700,190	5,327,840
Water consumption ... cubic feet	3,990,308,000	4,239,320,000	2,501,305,000
Oil consumption ... barrels	2,000	2,135	13,146
Power distributed to consumers ... KWH	4,413,164	4,776,562	4,685,090
Loss of power in plant auxiliaries, transmission and transformation ... KWH	905,986	923,628	642,750
Per cent of loss in power to gross output	17.03	16.02	12.06

The work of converting the signal system between Panama and Pedro Miguel for single-track operation is practically completed. The regular operation and maintenance work was carried on at all substations without any extraordinary occurrences.

Miscellaneous repairs and installations of electrical equipment were made on 48 vessels, 24 each at Cristobal and Balboa. There were 393 work orders issued for work to be performed by the Electrical Division in May, as compared with 465 for April.

The following work was under progress during the month, with completion on May 31 as shown:

	Per cent completed.
Installation of two 1,000-ampere, K-12 switches at Cristobal substation	100
Installation of new 8,400 KVA transformer and new tie-line equipment in Gatun substation	[1] 70
Installation of 2 complete feeder equipments at the Balboa substation	[1] 95

[1] Indicates that no work was performed during the month.

	Per cent completed.
Extension of new underground distribution in New Cristobal	[1] 99
Grounding of the watt-hour meter cases at Gamboa substation	100
Installation of electrical equipment in hydroelectric station	40
Installation of two 10 KVA transformers in feeder No. 4 (Fort Davis) at Gatun substation	100

[1] Indicates that no work was performed during the month.

SHOP, FOUNDRY, AND DRY DOCK WORK.

Repairs to the Spanish battleship *España* proceeded during the month. It was necessary to remove her flat keel and renew 56 feet of the vertical keel. This necessitated removal of the ordinary blocking used to support a vessel and the supporting of the forward part of the vessel on a forest of diagonal shores, while the portion of the keel and a large part of the bottom were being renewed. This feature has made the job a very unusual one, in addition to its being the most extensive job of the kind ever done on the Canal Zone.

The steamships *Lady Sybil* and *Azov* were overhauled, having been brought up from Chile for that purpose. A new low-pressure piston was cast for the steamship *Birmingham City* and installed, together with a new rod to replace the ones carried away at sea.

The scarcity of work for the Mechanical Division shops, together with the interruption of steamer service, has made further reductions in force necessary in addition to the extensive furloughing resorted to.

At the Cristobal shops, miscellaneous repairs were made on 57 vessels, 7 of which were dry-docked. The more important repair work consisted of the following:

The high-pressure piston rod packing of the steamship *Eastern Crown* was taken down and renewed where necessary; 1 vacuum gauge and 4 pressure gauges were cleaned and calibrated; spider was refitted and set of studs for line bilge pump was furnished; heater control valve for feed pump was relieved and adjusted and 1 gauge cock for line at main feed pump was manufactured, and packing and valve renewed.

The U. S. subchaser *No. 286* was docked and the bottom cleaned and repaired. All sea valves were examined and repaired as found necessary.

Derrick barge *No. 157* was dry-docked; the hull was repaired and the sheathing renewed where necessary and painted. Barge *No. 116* was dry-docked, and the sheathing, A-frames, and fenders repaired.

The schooner *Linda S* and the motor schooner *Laura C. Hall* were dry-docked, and the bottoms cleaned, repaired, and painted.

On the steamship *West Wind* the dynamos, steering engine, circulating engine, and sanitary pump were opened and the valves and rings were renewed, where necessary.

BUILDING DIVISION.

The following statement represents the degree of completion on April 30 and May 31 of the more important work under construction by the Building Division:

	Per cent completed.	
	April 30.	May 31.
Royal Mail Steam Packet Company's office, Cristobal	93	95
Repairs to 35 houses, Cristobal	85	95
Constructing 468 kitchenettes for silver townsite, Cristobal	60	75
Roof between buildings 2 and 3, Balboa	98	100
All-America Cable Company's office, Cristobal	73	80
Manufacture of 300 wooden rocking chairs	40	60
Erection of boiler, cold storage plant, Cristobal	35	55
Rebuilding ovens, Cristobal bakery	85	99
Manufacture of 48 revolving chairs	30	95
Repairs to roof, Hotel Washington	20	80
Barrett Specification roofing, Corozal storehouse	.....	80
Construct 2 type-17 cottages for All-America Cable Company	.....	85

Construction work for the Army and Navy is separately reported.

DREDGING DIVISION.

On the 26th of May a general movement commenced over nearly the entire Cucaracha Slide area and continued during the rest of the month. From the date of commencement of this movement to the end of the month, the dredge *Paraiso* worked within the basin in front of this slide, removing in that time 11,800 cubic yards. The total amount of material removed, since the slide in February, 1920, is 2,559,500 cubic yards.

No perceptible movement occurred elsewhere during the month except at the northern end of Barge Repair Slide, where a new break occurred.

There was no interference with Canal traffic during the month.

The total excavation in May, including earth and rock, was 447,400 cubic yards, as follows:

Cubic yards.	Classified as—		Character of work.	Stations.	Equipment
	Earth.	Rock.			
				Gaillard Cut, East Culebra.	
44,800	33,600	11,200	Maintenance	1773–00 to 1790–50 E	*Gamboa.*
				Gaillard Cut, Pontoon Bridge.	
13,100	.....	13,100	Construction	1884–00 to 1892–00 E	*Gamboa.*
2,000	.....	2,000	Construction	1884–00 to 1892–00 E	*Paraiso.*
11,100	3,000	8,100	Maintenance	1884–00 to 1892–00 E	*Paraiso.*
				Gaillard Cut, Cucaracha Slide.	
11,800	1,200	10,600	Maintenance	1805–00 to 1814–00 E	*Paraiso.*
				Pacific Entrance.	
5,000	.....	5,000	Construction	2190–00 to 2205–00 W 2298–00 to 2304–50 W.	*Cascadas.*
21,200	12,200	9,000	Maintenance	2190–00 to 2205–00 W 2298–00 to 2304–50 W.	*Cascadas.*
130,000	125,700	4,300	Maintenance	2280–00 to 2324–50 W	*No. 84.*
				Balboa inner harbor.	
22,850	17,850	5,000	Construction	Dry dock slip, Docks 15, 19, and limit line	*Cascadas.*
5,350	5,350	.....	Maintenance	Dry dock slip, docks 15, 19, and limit line	*Cascadas.*
				Atlantic terminals.	
180,200	180,200	.....	Aux. construction	Area No. 1, Cristobal	*No. 86.*
447,400	379,100	68,300			

The material excavated at the various stations was disposed of as follows:

	Cubic yards
Fill west of coaling station, Cristobal	180,200
Flats west of Canal, Pacific entrance	130,000
North of Gamboa	82,800
Dumped at sea, Pacific entrance	54,400
Total	447,400

The 15,100 cubic yards of rock (original) excavated during the month, completed all the construction dredging in Gaillard Cut. On June 1, 1921, only the following construction excavation remained:

Location.	Earth.	Rock.	Total.
	Cu. yds.	*Cu. yds.*	*Cu. yds.*
Pacific entrance	45,000	65,700	110,700

MUNICIPAL ENGINEERING DIVISION.

The total output of all pumping stations, and of the 3 filtration plants, amount of water consumed by Panama and Colon, and sales to vessels, as compared with the preceding month and with the corresponding month of last year, were as follows:

	May, 1921.	April, 1921.	May, 1920.
	Gallons.	*Gallons.*	*Gallons.*
Pumping stations	758,324,750	783,872,250	834,064,350
Filtration plants	472,802,000	479,176,000	509,616,000
Water consumed by Panama City	100,896,000	97,213,000	87,781,000
Water consumed by Colon	59,217,750	60,558,750	64,823,500
Sales of water to vessels	9,975,647	8,268,960	13,149,742

Construction work, as itemized below, was under progress during the month with completion on April 30 and May 31, as indicated:

	Per cent completed.	
	April 30.	May 31.
Municipal work, New Cristobal townsite:		
Grading	55	55
Roads	97.5	97.5
Water lines	72	72
Sidewalks	86	86
Installation of two 12-inch oil lines to Pier 6, Cristobal	45	60
Reconstruction of roads, Quarry Heights	95	95
New wash-water tank, Miraflores	95	95
Construction of new concrete sea wall, Santo Tomas Hospital	21	29
Construction of sewer and water lines, Southern Avenue, Panama City	50	50
Extension of roads, new Santo Tomas Hospital	5	6
Municipal work for two type-17 cottages, All-America Cable Company, Ancon	.....	40
Construction of sidewalks, San Pablo Street	.....	100

Municipal work performed for the Army and Navy is separately reported.

OCCUPANTS OF QUARTERS.

Occupants of Panama Canal and Panama Railroad quarters on May 31, were classified as follows:

	Men.	Women.	Children.	Totals.		
				May, 1921.	April, 1921.	May, 1920.
Americans	3,077	2,196	2,555	7,828	8,033	8,350
Europeans	155	38	80	273	260	225
West Indians	4,749	2,298	4,772	11,819	11,814	9,921
Totals, May, 1921	7,981	4,532	7,407	19,920	.....	.....
Totals, April, 1921	8,148	4,561	7,398	.....	20,107	.....
Totals, May, 1920	8,550	4,064	5,882	.....	.....	18,496

WORKING FORCE—NUMBER OF EMPLOYEES.

The reduction in the working force of the Canal organization has continued. The nun ber of gold employees as of May 18, 1921, is approximately 22 per cent less than that of a year ago, while the number of silver employees has been reduced 40 per cent from the number on the pay roll in May of last year.

The following tabulation shows the number of gold and silver employees, as of May 18, 1921, by departments, together with a comparison of the working force of the preceding month, and that of the corresponding month of last year:

Department or division.	Employees.		Total employees.		
	Gold.	Silver.	May, 1921.	April, 1921.	May, 1920.
Operation and Maintenance:					
Office	27	50	77	80	79
Building Division	101	275	376	422	1,952
Electrical Division	187	254	441	417	577
Municipal Engineering Division	99	763	862	885	1,459
Lock Operation	187	645	832	911	757
Dredging Division	170	759	929	938	1,288
Mechanical Division	616	1,043	1,659	1,968	2,842
Marine Division	197	461	658	684	667
Fortifications	60	242	302	326	291
Totals	1,644	4,492	6,136	6,631	9,912
Supply Department:					
Quartermaster	218	1,342	1,560	1,673	2,159
Subsistence	30	327	357	413	435
Commissary	265	1,197	1,462	1,655	1,960
Cattle Industry—Plantations	20	160	180	297	1,009
Hotel Washington	10	86	96	105	110
Totals	543	3,112	3,655	4,143	5,673
Accounting Department	225	9	234	240	271
Health Department	245	837	1,082	1,105	1,095
Executive Department	569	260	829	826	829
Totals	1,039	1,106	2,145	2,171	2,195
Panama Railroad:					
Superintendent	65	361	426	499	630
Transportation	100	141	241	250	326
Receiving and Forwarding Agency	66	493	559	971	1,578
Coaling station	114	561	675	1,405	1,430
Totals	345	1,556	1,901	3,125	3,964
Grand totals, May, 1921	3,571	10,266	13,837	.....	.....
Grand totals, April, 1921	3,731	12,339	.....	16,070	.....
Grand totals, May, 1920	4,613	17,131	.....	.....	21,744

VITAL STATISTICS.

A total of 161 deaths occurred during the month of May among the population of the Canal Zone and the cities of Panama and Colon, giving an annual death rate of 16.43 per thousand. Of the total deaths, 5 were due to external causes.

Of the above deaths, 69, or 43 per cent, occurred among children under 5 years of age.

Pneumonia, tuberculosis, and diarrhea and enteritis, in the order named, were the leading causes of death.

There were 16 deaths among nonresidents of the Isthmus; these are not included in the above statistics.

Three hundred and thirteen live births were reported during the month and 12 stillbirths. Including the stillbirths, this is equivalent to an annual birth rate of 33.17 per thousand population. Deaths among children under 1 year of age numbered 47, giving an infant mortality rate, based on the number of births reported for the month of 150.16 per thousand.

Sixty-six cases of malaria were reported during the month; of these, 29 were contracted outside the Canal Zone. There were 6 cases of typhoid fever reported, all nonresidents. Fifteen cases of smallpox were reported, 10 from Panama, 3 from Colon, 1 from the Canal Zone, and 1 nonresident.

One case of epidemic cerebrospinal meningitis was taken from the steamship *Anyo Maru*, which arrived at Balboa on May 22, 1921. All steerage passengers were taken in quarantine, but no further cases developed.

RECEIPTS AND SALES OF MATERIALS AND SUPPLIES.

The total value of the material ordered on United States requisitions and received on the Isthmus during the month, sales to steamships from storehouses, and cash sales from stock, as compared with the preceding month, and the corresponding month of last year, were as follows:

	May, 1921.	April, 1921.	May, 1920.
Material received on U. S. requisitions during the month:			
Operation and maintenance	$261,522.18	$317,038.37	$919,924.76
Construction and equipment	1,626.40	6,877.01	2,272.23
Miscellaneous departments	8,679.84	22,809.78	13,022.77
Totals	271,828.42	346,725.16	935,219.76
Cash sales on the Isthmus:			
Stock	36,066.36	35,081.05	43,546.17
Fuel oil	173.25	840.40	321,825.34
Scrap	649.73	368.66	1,249.51
Obsolete and second hand material	1,939.87	3,045.37	979.94
Totals	38,829.21	39,335.48	367,600.96
Sales to steamships from storehouses:			
Miscellaneous stock items	21,336.62	12,893.04	29,425.87
Fuel oil	.....	840.40	307,382.56
Totals	21,336.62	13,733.44	336,808.43

Respectfully,

JAY J. MORROW,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending June 18, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged.	Cargo— Laded.
				Tons.	*Tons.*
U. S. S. Nitro	United States Navy	June 13	June 15	165	.....
U. S. S. Neches	United States Navy	June 10	June 14	4,133	.....
Barima	Pacific Steam Navigation Co.	June 14	June 15	15	.....
Quillota	Pacific Steam Navigation Co.	June 16	June 16	4	.....
Peru	Pacific Steam Navigation Co.	June 17	June 17	.....	5
Venezuela	Pacific Mail Steamship Co.	June 17	June 18	20	43

Distribution of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, May, 1921.[1]

From—	North America. United States. North Atlantic ports.	North America. United States. South Atlantic ports.	North America. United States. Gulf ports.	North America. United States. Total, United States.	North America. West Indies.	North America. Cristobal, C. Z.	North America. East coast, Mexico.	North America. Total, North America.	Europe. Belgium.	Europe. British Isles.	Europe. Denmark.	Europe. France.	Europe. Germany.	Europe. Holland.	Europe. Italy.	Europe. Poland.	Europe. Europe.[2]	Europe. Total, Europe.	East coast, South America.	Egypt.	Grand total.	Per cent of total cargo.
South America:																						
Chile	24,597	9,635	6,732	40,964	.....	361	1	41,326	1,390	18,807	41	6,391	2,027	237	.....	.....	7,366	36,259	.....	.....	77,585	18.9
Colombia	2,414	.....	.....	2,414	.....	104	.....	2,518	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40	.....	2,558	0.6
Ecuador	3,531	.....	.....	3,531	.....	2,690	.....	6,221	.....	.....	404	.....	.....	.....	.....	.....	.....	404	.....	.....	6,625	1.6
Peru	2,600	.....	.....	2,600	.....	3,703	.....	6,303	.....	4,318	.....	.....	.....	.....	.....	.....	.....	4,318	.....	.....	10,621	2.6
West coast, South America [2]	478	.....	.....	478	.....	294	.....	772	.....	9,305	.....	.....	.....	.....	.....	.....	.....	9,305	.....	.....	10,077	2.5
Total, South America	33,620	9,635	6,732	49,987	.....	7,152	1	57,140	1,390	32,430	445	6,391	2,027	237	.....	.....	7,366	50,286	40	.....	107,466	26.2
North America:																						
West coast, United States	47,831	1,465	423	49,719	4,934	126	795	55,574	799	35,563	525	11	14,838	6,600	31,702	7,600	29,307	126,945	2,690	.....	185,209	45.0
West coast, Canada	2,522	.....	.....	2,522	.....	.....	.....	2,522	.....	181	.....	.....	.....	.....	.....	.....	.....	181	.....	8,417	11,120	2.7
West coast, Central America	240	.....	229	469	200	7,157	.....	7,826	.....	.....	.....	.....	.....	.....	.....	.....	746	746	.....	.....	8,572	2.1
Total, North America	50,593	1,465	652	52,710	5,134	7,283	795	65,922	799	35,744	525	11	14,838	6,600	31,702	7,600	30,053	127,872	2,690	8,417	204,901	49.8
Asia:																						
China	3,500	.....	.....	3,500	1,054	114	.....	4,668	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,668	1.1
Japan	1,556	.....	.....	1,556	.....	.....	.....	1,556	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,556	0.4
Malay Peninsula	973	.....	.....	973	.....	.....	.....	973	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	973	0.2
East Indies	384	.....	.....	384	.....	.....	.....	384	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	384	0.1
Far East [2]	47	.....	.....	47	.....	.....	.....	47	.....	.....	.....	.....	.....	.....	.....	.....	185	185	.....	.....	232	0.1
Total, Asia	6,460	.....	.....	6,460	1,054	114	.....	7,628	.....	.....	.....	.....	.....	.....	.....	.....	185	185	.....	.....	7,813	1.9
Australasia:																						
Australia	370	.....	.....	370	.....	.....	.....	370	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	370	0.1
New Zealand	790	.....	.....	790	.....	.....	.....	790	.....	50,123	.....	.....	.....	.....	.....	.....	.....	50,123	.....	.....	50,913	12.4
Australasia [2]	.....	.....	.....	.....	.....	.....	.....	.....	.....	250	.....	.....	.....	.....	.....	.....	.....	250	.....	.....	250	.....
Total, Australasia	1,160	.....	.....	1,160	.....	.....	.....	1,160	.....	50,373	.....	.....	.....	.....	.....	.....	.....	50,373	.....	.....	51,533	12.5
Hawaii	11,699	.....	28,000	39,699	.....	.....	.....	39,699	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	39,699	9.6
Grand totals	103,532	11,100	35,384	150,016	6,188	14,549	796	171,549	2,189	118,547	970	6,402	16,865	6,837	31,702	7,600	37,604	228,716	2,730	8,417	411,412	100.0
Per cent of total cargo, May, 1921	25.2	2.7	8.6	36.5	1.5	3.5	0.2	41.7	0.5	28.8	0.2	1.6	4.1	1.7	7.7	1.9	9.1	55.6	0.7	2.0	100.0	.....
Per cent of total cargo, April, 1921	30.6	12.1	0.4	43.1	.....	2.2	0.2	45.5	0.2	31.3	0.6	6.7	3.0	4.5	3.1	.....	5.1	54.5	.....	.....	.....	.....

[1] Figures represent tons of 2,240 pounds.

[2] General cargo not routed so as to allow segregation among various ports.

Distribution of Cargo Passing Through the Panama Canal from the Atlantic to the Pacific, May, 1921.[1]

From—	South America.						North America.					Asia.					Australasia.						
	Chile.	Colombia.	Ecuador.	Peru.	West coast, South America.[2]	Total, South America.	West coast, United States.	West coast, Canada.	West coast, Central America.	Pacific terminus, Panama Canal.	Total, North America.	China.	Japan.	Philippines.	Far East.[2]	Total, Asia.	Australia.	New Zealand.	Australasia.[2]	Total, Australasia.	Hawaii.	Grand totals.	Per cent of total cargo.
North America:																							
North Atlantic ports	1,791	3	315	15,918	7,915	25,942	70,361	190	....	.....	70,551	9,579	8,510	3,352	31,951	53,392	3,820	511	18,961	23,292	2,135	175,312	46.0
South Atlantic ports	.....	....	....	.....	.....	.....	709	....	14	.....	723	2,256	243	.....	1,081	3,580	....	10,647	2,696	13,343	.....	17,646	4.6
Gulf ports	.....	....	....	.....	.....	.....	17,196	....	....	.....	17,196	8,781	7,873	.....	11,266	27,920	5,500	.....	.....	5,500	.....	50,616	13.3
Total, United States	1,791	3	315	15,918	7,915	25,942	88,266	190	14	.....	88,470	20,616	16,626	3,352	44,298	84,892	9,320	11,158	21,657	42,135	2,135	243,574	63.9
East coast of Mexico	27,562	....	....	.....	.....	27,562	41,829	....	....	10,450	52,279	.....	7,879	.....	.....	7,879	.....	.....	.....	.....	.....	87,720	23.0
Atlantic terminus, Panama Canal	282	173	165	424	1,171	2,215	562	....	873	.....	1,435	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,650	0.9
Canada	.....	....	....	.....	.....	.....	.....	....	....	.....	.....	.....	.....	.....	.....	.....	134	.....	1,262	1,396	.....	1,396	0.4
Total, North America	27,844	173	165	424	1,171	29,777	42,391	....	873	10,450	53,714	.....	7,879	.....	.....	7,879	134	.....	1,262	1,396	.....	92,766	24.3
Europe:																							
Belgium	389	....	....	.....	.....	389	4,704	3	....	.....	4,707	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,096	1.4
British Isles	1,074	....	88	117	5,714	6,993	.....	....	....	.....	.....	.....	.....	.....	.....	.....	406	10,234	6,814	17,454	.....	24,447	6.4
Germany	1,251	....	....	1,066	500	2,817	.....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,817	0.7
Holland	215	....	....	355	.....	570	.....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	570	0.1
Italy	2,236	....	....	.....	1,013	3,249	.....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,249	0.9
Norway	.....	....	....	.....	.....	.....	530	....	....	99	629	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	629	0.2
France	200	....	....	.....	575	775	.....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	775	0.2
Sweden	.....	....	....	.....	.....	.....	67	....	23	.....	90	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	90	....
Europe[2]	.....	....	....	.....	2,454	2,454	3,500	225	....	.....	3,725	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,179	1.6
Total, Europe	5,365	....	88	1,538	10,256	17,247	8,801	228	23	99	9,151	.....	.....	.....	.....	.....	406	10,234	6,814	17,454	.....	43,852	11.5
East coast, South America	.....	905	....	.....	.....	905	.....	....	....	.....	.....	.....	226	.....	.....	226	.....	.....	.....	.....	.....	1,131	0.3
Grand totals	35,000	1,081	568	17,880	19,342	73,871	139,458	418	910	10,549	151,335	20,616	24,731	3,352	44,298	92,997	9,860	21,392	29,733	60,985	2,135	381,323	100.0
Per cent of total cargo, May, 1921	9.2	0.3	0.1	4.7	5.1	19.4	36.5	0.1	0.2	2.8	39.6	5.4	6.5	0.9	11.6	24.4	2.6	5.6	7.8	16.0	0.6	100.0	.....
Per cent of total cargo, April, 1921	15.6	0.3	0.2	3.6	4.7	24.4	26.0	1.4	0.4	2.0	31.0	2.3	7.9	4.1	4.7	22.2	6.2	8.9	7.3	22.4	.....	.....	.....

[1] Figures represent tons of 2,240 pounds.

[2] General cargo not routed so as to allow segregation among various ports.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight June 18, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Silver State	12	12.38	12	13.35	12	19.34	13	14.25	American	Pacific Steamship Co. (S. B.)	517.0	72.2	24.6	New York	Hongkong	General	485	15,296	10,387
R-24 and R-26 [1]			12	8.15	12	15.12			American	United States Navy				Cristobal	Balboa				
Breckenridge [2]			12		12	10.46			American	United States Army				Cristobal	Gatun				
Canadian Observer	13	4.30	13	6.45	13	14.05	13	15.25	British	Canadian Government	251.0	43.0	17.6	Montreal	Vancouver	General	536	2,554	1,611
Santa Barbara	13	14.14	14	6.11	14	13.08	14	14.40	American	W. R. Grace & Co	404.0	54.0	24.8	New York	W. coast port	Steel	4,500	6,789	4,746
Caddo	13	17.35	14	6.23	14	14.54	14	19.58	American	Standard Oil Co	414.0	55.0	29.0	Tampico	Pisagua	Crude oil	8,862	6,437	4,298
Washington	14	8.35	15	6.30	15	13.32	17	14.10	Mexican	Mexican Navigation Co	251.0	39.0	17.2	Pensacola	Salina Cruz	Coal	2,000	1,890	1,204
Steel Worker	15	2.10	15	7.12	15	14.28	15	18.51	American	Isthmian Steamship Line	424.0	56.0	26.0	New York	San Diego	Steel and general	8,929	7,539	5,495
Aysen	10	14.38	15	10.10	15	16.57	15	18.03	Chilean	South American Steamship Line	379.0	44.0	21.8	Cristobal	Valparaiso	General	528	4,535	3,068
George Washington [3]	15	12.50	15	13.10	16	9.32	16	11.06	Norwegian	Fred Olsen	425.0	55.0	23.0	Antwerp	San Francisco	General	6,006	7,505	5,627
Dryden	16	6.25	16	7.35	16	14.48	17	21.30	American	Barber Line (S. B.)	434.0	57.0	23.3	New York	Shanghai	General	6,145	7,983	5,882
Ucayali	12	15.20	16	10.10	16	16.41	16	18.00	Peruvian	Peruvian Steamship Line	374.0	46.0	17.1	Cristobal	Callao	General	310	4,466	2,405
S. C. 287 [4]			16	7.15	16	14.32			American	United States Navy				Cristobal	Balboa				
Montana	15	17.09	17	6.09	17	13.46	17	14.48	French	French Line	390.0	49.0	19.0	Havre	Talcahuano	General	385	6,327	4,369
Peru	10	17.31	17	6.12	17	12.32	17	15.15	British	Pacific Steam Navigation Co	350.0	43.0	18.3	Cristobal	Valparaiso	General	265	4,095	2,655
Mundelta	17	1.25	17	6.57	17	14.46	17	20.00	American	Munson Steamship Co	370.0	53.0	24.9	Norfolk	Tiburon	Coal	7,115	5,668	4,297
Sherman	17	6.35	17	7.40	17	15.38	17	16.46	American	Sherman Steamship Co	400.0	45.0	24.6	New York	Valparaiso	General, coal	4,340	5,037	3,492
O-12 and O-14 [1]			17	7.40	17	14.40	18	18.58	American	United States Navy				Cristobal	Balboa				
Willpolo	17	15.50	18	6.00	18	14.55	18	15.40	American	Williams Steamship Co	386.8	52.2	20.0	New York	Tacoma	General	3,494	5,680	4,112
Salvador	5–31	13.11	18	6.00	18	13.12	18	16.32	British	Pacific Steam Navigation Co	215.0	33.0	13.7	Cristobal	Champerico	General	508	1,213	692
Houston [5]	15	8.55	18	6.07	18	13.20	18	17.54	American	United States Navy	392.0	51.0	23.9	Hampton Rds.	San Diego	Navy stores	3,510		
Lake Fithian	18	5.00	18	6.40	18	15.35	18	19.52	American	N. O. and S. A. Line (S. B.)	253.4	43.8	24.2	New Orleans	Talcahuano	General	3,670	2,915	1,907
West Katan	18	5.00	18	7.10	18	14.47	19	13.45	American	Williams Dimond & Co. (S. B.)	427.0	54.0	18.6	Antwerp	San Francisco	General, steel	2,923	6,573	4,901
Orestes	17	5.55	18	12.11	18	19.15	19	7.50	Dutch	Royal Netherlands W. I. Mail	347.0	48.0	15.0	Amsterdam	Guayaquil	General	1,000		

[1] Submarines. [2] Launch. [3] Motor ship. [4] Towing launch *No. 4*. [5] Supply ship.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ucayali	12	4.45	12	8.24	12	15.20	16	10.10	Peruvian	Peruvian Steamship Co	374.7	46.3	19.1	Callao	Cristobal	General	1,461	4,465	2,405
Maple Branch	12	7.00	12	8.32	12	16.21	12	21.10	British	F. & W. Ritson	400.0	52.0	24.6	Talcahuano	Liverpool	General	7,058	5,618	4,116
Cootie [2]										Johnson				Balboa	Cristobal				
Essequibo	13	4.00	13	8.15	13	15.10	13	20.39	British	Royal Mail Steam Packet Co	449.0	57.8	23.0	Valparaiso	New York	General	2,031	9,037	6,089
Port Hacking	13	11.50	13	13.14	13	21.00	13	22.46	British	Commonwealth and Dom. Line	440.0	55.1	19.6	Welson	London	General	3,331	7,885	5,847
Jeseric	13	19.05	14	6.33	14	15.17	15	18.34	British	Andrew Weir	370.0	52.1	26.0	Caleta Colosa	New York	Nitrate	7,450	5,915	4,467
Murla	13	22.30	14	7.47	14	16.10	14	19.33	German	Roland Line	267.9	42.1	17.5	Corral	Hamburg	(6)	2,650	2,188	1,361
Kina	14	5.30	14	8.51	14	17.10	14	19.40	Danish	Orient Steamship Co	373.9	51.8	27.0	Portland	Bremen	Wheat	8,249	6,080	4,618

[6] Copper, zinc ore, and general.

Albertolite	14	6.00	14	14.27	14	21.10	14	23.15	British	Imperial Oil Co	463.2	60.2	21.0	Vancouver	Tampico	Ballast	.....	8,491	6,096
Neches [7]	11	12.45	15	6.23	15	12.58	15	15.12	American	United States Government	477.0	55.0	.....	Balboa	Norfolk	Ballast	.....	.....	.....
Barima	14	17.30	15	6.53	15	14.27	.....	.....	British	Pacific Steam Navigation Co	220.0	37.0	13.0	Champerico	Cristobal	General	765	1,651	918
Nitro [5]	13	10.15	15	8.21	15	15.40	15	17.30	American	United States Government	492.0	60.1	19.6	Puget Sound	New York	Naval supplies	565	8,426	5,269
Colin H. Livingstone	15	6.00	15	8.55	15	16.40	15	16.40	American	N. A. & West. S. S. Co. (S. B.)	400.6	53.0	24.0	Seattle	New York	Lumber, general.	6,812	6,586	4,855
Durban Maru	15	8.30	15	10.02	15	17.46	15	17.46	Japanese	Nippon Yusen Kaisha	420.0	56.0	18.3	Osaka, Japan	New York	General	4,929	7,445	5,345
Manavi	14	17.30	15	11.16	15	18.55	.....	.....	British	Pacific Steam Navigation Co	216.0	35.1	13.0	Guayaquil	Cristobal	General	439	1,357	884
Lake Floris	15	14.50	16	6.26	16	13.27	16	14.04	American	N. O. and S. A. S. S. Co. (S. B.)	251.0	43.6	24.4	Iquique	Jacksonville	Nitrate	3,585	2,857	1,782
Quillota	15	23.30	16	7.45	16	14.55	17	17.38	British	Pacific Steam Navigation Co	361.4	46.2	20.0	Guayaquil	New York	General	1,473	4,768	2,956
Rotarian	14	17.00	16	8.30	16	16.00	16	16.00	American	Swayne & Hoyt (S. B.)	380.3	53.1	24.6	San Francisco	Buenos Aires	General	5,683	5,660	4,174
Reiyo Maru	15	13.30	16	9.06	16	17.10	16	17.10	Japanese	Toyo Kisen Kaisha	400.0	53.0	21.6	Iquique	Wilmington	Nitrate	3,500	6,310	4,598
Bantu	16	11.10	16	11.45	16	19.36	16	22.56	American	Isthmian Steamship Co	360.0	47.0	23.6	Vancouver	Boston	Lumber, general.	5,000	4,604	3,047
Port Pirie	16	12.35	16	13.45	16	20.50	17	12.30	British	Cunard Line	470.1	58.4	21.9	New Plymouth	London	(8)	3,709	9,381	6,915
Remuera	16	13.15	17	6.32	17	14.05	17	16.25	British	New Zealand Shipping Co	485.0	62.3	25.6	Wellington	London	(9)	4,258	11,600	8,685
Ceres	16	14.45	17	7.25	17	15.30	18	17.19	Dutch	Royal Netherlands Steamship Co.	340.0	48.0	18.0	Talcahuano	Amsterdam	Grain	3,320	4,243	3,123
Santa Tecla	17	1.00	17	17.47	17	15.00	17	15.20	American	W. R. Grace & Co	298.6	40.0	15.0	Callao	Cartagena	General	720	2,835	1,827
Balboa	17	9.35	17	12.47	17	19.35	20	8.10	American	Colombian Maritime Co	190.0	29.1	14.3	Guayaquil	Cristobal	(10)	576	741	359
Venezuela	17	4.03	18	6.31	18	13.17	19	13.00	American	Pacific Mail Steamship Co	380.0	48.7	22.1	San Francisco	Baltimore	General	2,490	.....	.....
Formosa	17	7.00	18	6.47	18	15.00	18	15.20	Swedish	Swedish East Asiatic Co	420.0	54.0	30.0	Portland	Naples	Wheat	10,025	.....	.....
Acardo	17	18.15	18	7.55	18	16.25	18	22.10	British	Anglo-Saxon Petroleum Co	412.0	53.0	24.6	San Francisco	United King	Lubricating oil	7,248	6,241	4,293
Sedgepool	17	17.45	18	8.11	18	16.38	18	20.43	British	R. Ropner & Co	415.0	55.5	25.6	Portland	Cork, Ireland	Wheat	8,477	.....	.....
Willsolo	18	6.00	18	8.20	18	17.45	18	23.30	American	Williams Steamship Co. (S. B.)	434.3	57.0	28.0	Seattle	New York	Lumber, general.	7,000	7,983	5,882
Jason	18	1.00	18	14.54	18	22.40	.....	.....	Dutch	Royal Netherlands Steamship Co.	346.5	48.5	19.0	Valparaiso	Amsterdam	General	3,740	4,321	3,120

[7] Collier. [8] Cold storage and general. [9] Frozen, dairy products, and general. [10] Hides, cocoa, coffee, nuts, and hats.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
June 13	Middlebury	United States Shipping Board	Kingston.	June 13	Hannibal	United States Navy	High seas.
June 13	Gen. W. C. Gorgas	Panama Railroad Steamship Line	New York via Haiti.	June 13	Martinique	French Line	Puerto Colombia.
June 13	Manuel Calvo	Spanish Line	Barcelona via wayports.	June 14	Middlebury	United States Shipping Board	Cartagena.
June 14	Abangarez	United Fruit Co	New Orleans.	June 15	Ulua	United Fruit Co	New York via wayports.
June 14	Ulua	United Fruit Co	New York via Habana.	June 16	Sixaola	United Fruit Co	New York via Kingston.
June 15	Caribbean	Panama Railroad Cattle Industry	Cartagena.	June 16	Santa Marta	United Fruit Co	New York, via Colombia and Kingston.
June 15	Oranje Nassau	Royal Netherlands W. I. Mail	Antwerp.	June 16	Abangarez	United Fruit Co	New Orleans and Bocas del Toro.
June 15	Santa Marta	United Fruit Co	New York via Kingston.	June 17	Caribbean	Panama Railroad Cattle Industry	Cartagena.
June 15	Sixaola	United Fruit Co	Colombian ports.	June 17	Manuel Calvo	Spanish Line	Puerto Colombia.
June 16	Satoe	Curacao Petroleum Co	Curacao.	June 17	Oranje Nassau	Royal Netherlands W. I. Mail	Puerto Colombia.
June 18	San Bruno	United Fruit Co	Boston via wayports.	June 18	San Bruno	United Fruit Co	Boston.
June 18	Hellas	Bruusgaard Kiosterud	Puerto Colombia.				
June 18	Cantigny [11]	United States Army	New York via San Juan.				
June 18	Cristobal	Panama Railroad Steamship Line	Norfolk.				

[11] Transport.

PORT OF BALBOA.

June 15	Iquitos	Peruvian Line	Callao.	June 18	Iquitos	Peruvian Line	Vancouver.

*Other than ships passing through the Canal.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending June 18, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged.	Laded.
				Tons.	*Tons.*
Jamaica	Pacific Steam Navigation Co		June 12		51
Martinique	French Line		June 13		148
Aysen	Chilean Line		June 15		527
Ucayali	Peruvian Line	June 12	June 16	1,398	389
Gen. W. C. Gorgas	Panama Railroad Steamship Line	June 13		2,868	
Manuel Calvo	Spanish Line	June 13	June 17	367	484½
Peru	Pacific Steam Navigation Co		June 17		323
Abangarez	United Fruit Co	June 14	June 16	876	102
Ulua	United Fruit Co	June 14	June 15	453	2
Santa Marta	United Fruit Co	June 15	June 16	41	402
Sixaola	United Fruit Co	June 15	June 16	80	39
Caribbean	Panama Railroad Cattle Industry	June 15	June 17	400	46
Oranje Nassau	Royal Netherlands W. I. Mail	June 15	June 17	14	1,744
Manavi	Pacific Steam Navigation Co	June 15		439	
Barima	Pacific Steam Navigation Co	June 15		765	
Montana	French Line	June 15	June 17	87	(1)
Quillota	Pacific Steam Navigation Co	June 16	June 17	752	345¾
Jamaica	Pacific Steam Navigation Co	June 17		123½	
Orestas	Royal Netherlands W. I. Mail	June 17	June 18	278	(1)
Balboa	Colombian Maritime Co	June 17		576	
Salvador	Pacific Steam Navigation Co		June 18		507½
San Bruno	United Fruit Co	June 18	June 18	18	[2]258
Venezuela	Pacific Mail Steamship Co	June 18		1,276	
Cristobal	Panama Railroad Steamship Line	June 18		8,522	

[1] No cargo laded. [2] Pounds.

Notice to Mariners.—Obstruction to Navigation.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 17, 1921.

CIRCULAR NO. 643-88:

The master of the steamship *Nitro* reports by radio having passed at 11.30 a. m., while in latitude 12° 28′ north, longitude 78° 21′ west, a large tree, about 50 feet long with branches attached and extending about 15 feet above the water, dangerous to navigation.

JAY J. MORROW,
Governor.

Coal at St. Lucia.

The Peters Coaling Company, of St. Lucia, B. W. I., reports that their present stock is 2,600 tons, and that there is a total stock of 9,500 tons in port. The price on June 1 was 80 shillings per ton.

New Floating Dry Dock on the Delaware River.

The Sun Shipbuilding Company of Chester, Pa., advises that it has placed in commission a new floating dry dock of modern type capable of lifting vessels of 10,000 tons in less than 20 minutes. The company's plant is on the Delaware River near Philadelphia and includes, in addition to the dry dock, extensive shops.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended June 17:

U. S. S. *Tacoma*, dock, remove broken port tail shaft and install new tail shaft and new propeller; remove starboard propeller and install new one; install doubling plates under submarine bell receiving set on both bows; steamship *Eelbeck*, refit and line up all main bearings; refit H. P., L. P., and I. P. crank pin and crosshead bearings; refit L. P. eccentric; check alignment of piston rods; calk front rings in port and center boilers; fit key in flywheel on circulating engine; refit valve gear on sanitary pump; disassemble, clean, adjust, and reassemble inboard fuel oil pump; weld

throttle arm on Nos. 3 and 4 winches; U. S. submarines *R–26*, dock, stage and clean, paint bottom; renew zincs where necessary; secure lead ballast on after main battery tank; renew superstructure plating in deck, starboard side of 3-inch gun; overhaul sea valves; repack steering rudder glands; install Forbes' log; renewing lifting handle for torpedo tube tripping latches; renew outboard torpedo tube door gaskets as necessary; calibrate one depth gauge and 4 trimming tank gauges; install chain drive on air compressor; *R–24*, dock, stage and clean, paint bottom; renew zincs where necessary; overhaul all sea valves; examine steering rudder glands and repack as necessary; install Forbes' log; install chain drive on air compressors; weld armature cores on main motors to spiders; stiffen motor frames and foundations; steamships *Rotarian*, braze flange on one piece of 1½″ copper pipe and remove, shorten, and replace 1 piece of ¾″ heater pipe; *Iquitos*, free up Nos. 1, 5, and 6 starboard goosenecks on cargo booms.

PREVIOUSLY REPORTED.

Tug *Gorgona*, miscellaneous engineer's and deck department repairs; launch *Taboga*, general overhaul; dredge *Cascadas*, general repairs.

The following vessels were at the Cristobal shops for repairs during the week ended June 20:

Steamships *Cristobal*, *Allianca*, *General W. C. Gorgas*, miscellaneous repairs and painting to engine, deck, and steward departments; *Ceres*, make new H. P. cylinder head; tug *San Juan*, dock and undock; clean bottom, renew galvanized iron sheeting where necessary; renew shoe of keel; renew guard around stern; fasten stem, overhaul dynamo; renew wood in stern bearing; renew propeller; repair pump, etc.; steamships *Manavi*, renew 4 tubes in port boiler, etc.; *Jeseric*, repair steering gear chain links where required; U. S. S. *Gold Star*, clean and paint bottom; install 160 tubes in boiler and renew brickwork in both boilers; tugs Supply *No. 1*, install new piston rings on all cylinders and air compressor; clean and paint bottom, repair air cooling coils; *Favorite*, clean and paint bottom, repairs to rudder as necessary; make new awning; motor ship *Satoe*, clean and paint bottom, fit bulwarks; bower anchor and cables to be run out and overhauled; close forward engine room door; water-tight doors to be cut on port side and starboard side abreast forward E. R. platform; close steward's and cook's door in saloon alleyway and cut new water-tight door to starboard side; water-tight rubber trunk to be fitted around rudderpost from ship's counter to deck; fit chart room as chief officer's cabin; all ports in forecastle head to be blank flanged, crank shafts of 4 engines to be put in lathe and crank pins to be machined up to uniform size; main bearings to be examined and crank shafts and tunnel shafting to be put in line; governor gear to be overhauled, all sea valves to be ground in; crank pin brasses to be remetaled and bored out to suit crank pins where necessary, etc.; steamships *West Hepburn*, repair revolution counter, repair bilge line pumps; water service in shaft alley on main engine; expansion joint on steering engine steam line, etc.; *Barima*, clean and paint bottom, renew heater coils, fuel pipes, broken door checks, and clean scuttling tank; U. S. submarine *R–25*, remove anchor gear, increase clearance, install listening apparatus, etc.; U. S. mine planter *Graham*, U. S. Army transport *Cantigny*, launch *Rodman*, steamships *Metapan*, *Orestes*, *Oranje Nassau*, *Ulua*, *Abangarez*, *Manuel Calvo*, minor repairs.

Coal Bunkers.

The Berwind-White Coal Mining Company states that bunker coal prices at the below-named ports have been extended until the end of June:

Barbados, 80/.
St. Lucia, 80/.
Trinidad, 79/.
Curacao, 79/.
St. Thomas, 79/.
San Juan, $16.25.
Bermuda, $15.
Vera Cruz, $20.

Habana—The price at this port was reduced as of June 1 to $12.75 per long ton trimmed into bunkers.

Atlantic Islands—Effective June 1 Islands prices were reduced 5 shillings per ton and the new rates therefore are as follows:

St. Vincent, 82/6.
Las Palmas, 80/.
Teneriffe, 80/.
Madeira, 80/.

Dakar—This port was also reduced 5 shillings on June 1 and until further notice the rate here will be 82/6.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Coal and Fuel Oil Prices.

By the courtesy of Willard, Sutherland & Co. of New York the following coal and fuel oil prices as of May 20, 1921, are quoted from their monthly circular:

COAL.

New York, $6.50 best quality f. a. s. lighters.
Philadelphia, $7 best quality trimmed ex. lighters.
Baltimore, $7 best quality trimmed ex. lighters.
Newport News, Sewalls Point, Lamberts Point, $6.50 f. o. b. under chutes at coal piers.
Portland, Me., $9.50 t. i. b. ex. lighters; $8 t. i. b. alongside supplier's wharf.
Boston, $10 t. i. b. ex. lighters.
Wilmington, $11 f. o. b. ex. lighters.
Charleston, $7 f. o. b. piers.
Savannah, $7 f. o. b. piers.
Jacksonville, $10 t. i. b. alongside supplier's wharf.
Tampa, $10.50 t. i. b. alongside supplier's wharf.
Pensacola, $6.90 high grade Black Creek or Cahaba; $6.25 Pratt or equal, f. o. b. and trimmed.
Mobile, $7 high grade washed Black Creek f. o. b. under chutes.
New Orleans, $8.45 Sipsey, $7.65 Warrior River, $7.50 Pratt R/M, t. i. b. ex. lighters.
Galveston, $12 t. i. b. ex. lighters alongside Galveston Wharf Co. wharves.
San Diego, $17.86 Utah steam coal f. o. b. alongside dock.
San Pedro, $17.11 Utah steam coal f. o. b. alongside dock.
San Francisco, $15.22 Utah steam coal f. o. b. ex. lighters.
Seattle, $10.75 Comox steam coal f. a. s., ex. lighters.
Portland, Oreg, $13.50 King (Utah) coal f. o. b. ship's hatch at bunker dock.
Astoria, $10.75 Wingate R/M f. o. b. ship's hatch.
Tacoma, $11 f. a. s. ex. lighters.
Union Bay, Vancouver, $9.21 Comox steam coal f. o. b. under chutes at coal piers.
Amsterdam, 24 Fl.
Antwerp, 50/ Welsh or north country.
Azores, 85/.
Barbados, 90/.
Batavia, Fl. 47.50 to 67.50 according to quality and point of delivery.
Bermuda, $15.
Bremen, 60/.
Brisbane, Australia, 18/2 to 24/4 according to quality and point of delivery.
Copenhagen, 65/.
Curacao, $15.75.
Emden, 60/.
Hamburg, 44/6 (Durham. American).
Holtenau, 57/ American.
Melbourne, 40/ to 43/ according to point of delivery.
Newcastle, Australia, 26/3.
Rotterdam, 23 Fl.
St. Lucia, 90/.
St. Thomas, V. I., 79/.
Singapore, 80/ to 95/ according to quality.
Surabaya, Fl. 47.50 to 67.50 according to quality and point of delivery.
Sydney, Australia, 32/.
Trinidad, 89/.

FUEL OIL.

Amsterdam, Fl. 70; Diesel, Fl. 105; Solar, Fl. 120.
Batavia, 135/; Diesel, 205/.
Curacao, 70/.
Hongkong, 135/; Diesel, 205/.
Las Palmas, 90/ plus dues.
Liverpool, 90/; Diesel, 120/.
Manila, 135/; Diesel, 205/.
New Orleans, $1.35 per barrel.
Nagasaki, 135/; Diesel, 205/.
Plymouth, 90/.
Rotterdam, Fl. 70; Diesel, Fl. 105; Solar, Fl. 120.
Singapore, 135/; Diesel, 205/.
Sydney, 150/; Diesel, 175/.
Thameshaven, 90/; Diesel, 120/.
Trinidad, $15.50.
Yokohama, 135/; Diesel, 205/.

Renewal of Bicycle Licenses.

All private bicycle licenses which were issued between July 1, 1920, and May 13, 1921, expire June 30, 1921. The numeral plates issued with these licenses have a dark red background and white raised letters. The Executive Order of April 14, 1921, which became effective May 14, 1921, provides that licenses shall be paid for the calendar year, but if any part of the calendar year shall have expired when the license is taken out, then the license fee to be paid shall be proportioned on a quarterly basis to the part of the calendar year remaining, including therein the calendar quarter in which the license is paid.

Canal Zone residents who hold bicycle licenses which expire June 30, 1921, may have them renewed for the 6 months ending December 31, 1921 for a fee of 50 cents. On and after October 1, 1921, the fee will be 25 cents. Residents of the Republic of Panama may procure reciprocal Canal Zone bicycle licenses for the remainder of the present calendar year for a fee of $1. Licenses are issued by the Chief, Division of Civil Affairs (room 301, Administration Building), Balboa Heights, and may be procured in person or by mail. If application for a license is made by mail, statement should be made as to where the licensee resides, and of the make, number, and old license number of the bicycle to be licensed. Remittances should be made by registered letter, money order, or check, and all checks or money orders should be made payable to the Collector, The Panama Canal, Balboa Heights.

All private bicycle licenses which have been issued since May 14, 1921, are valid until December 31, 1921.

As official bicycle licenses are issued for an indefinite period of time the tags with black letters and white background will continue to be valid.

Weather Conditions in May, 1921.

The rainfall for the month was generally below normal everywhere except on the Pacific and Atlantic coasts. Totals in the Canal Zone and immediate vicinity ranged from 3.79 inches at Cucherbo to 14.08 inches at Gatun. The greatest amount of precipitation recorded on any one day was 4.30 inches at Colon on the 23d.

The estimated rainfall over Gatun Lake watershed area was 9.15 inches, compared with a 11-year mean of 11.65 inches; while over the Chagres River watershed area above Alhajuela, it was 11.47 inches, compared with a 20-year mean of 12.44 inches.

The air temperature was slightly below normal at Balboa Heights and Gatun, and slightly above at Gamboa, Alhajuela, and Colon. The atmospheric pressure and wind movement was slightly above the average, while the relative humidity and surface temperature of the sea was slightly below the average. The evaporation was below the average everywhere, except at Balboa Heights and Gamboa, and the daytime cloudiness was slightly below the average on the Pacific Coast and slightly above the average on the Atlantic.

Several fogs were observed at interior stations, all of which were dissipated by 7.30 a. m.

Seismic disturbances were recorded on the 1st, 16th, and 25th.

Gatun Lake hydrology—Mean elevation of Gatun Lake, 82.33 feet; maximum, 82.62 feet on the 31st; minimum, 82 feet on the 21st; evaporation from Gatun Lake surface, 4.588 inches; rainfall on Gatun Lake drainage basin, 9.15 inches; total yield of Gatun Lake watershed was 2.39 inches on the watershed and amounted to 26 per cent of the rainfall.

Stations.	Pressure (reduced to mean of 24 hours.)	Temperature.					Mean relative humidity.	Precipitation.			Wind.				
		Mean.	Maximum.	Date.	Minimum.	Date.		Total inches.	Station average.	Days with 0.01 inch or more.	Total movement (miles).	Prevailing direction.	Maximum velocity in miles.	Direction.	Date.
Balboa Heights...	29.860	80.2	91	May 11	70	May 8	84.9	8.60	8.24	19	5,426	N.W.	32	N. W.	May 11
Colon.....	29.864	81.1	91	May 31	72	May 24	81.2	13.61	12.48	18	6.650	N.	26	N. W.	May 7
Gatun.....	.....	80.2	89	May 28	71	May 24	....	14.08	13 27	23	4,840	[1] N.	32	S.	May 27
Gamboa....	.....	80.9	93	May 18	71	May 9	....	5.89	10.50	22	4,079	N E.	21	S.	May 26

[1] And N.W.

"For Hire" and "Engaged" Signs for Public Self-Propelled Vehicles.

The Executive Order of February 26, 1921, containing regulations governing passenger conveyances, which was effective May 1, 1921, provides in Section XVII as follows:

"Public self-propelled vehicles when on public stands or under way shall display in English or Spanish a sign, 9 inches in length by 5 inches in width, affixed to the front of the vehicle behind the wind shield, which shall read on the one side "For Hire" in black 2-inch letters on white background and on the other side "Engaged" in white 2-inch letters on red background; sign to be affixed by swivel so that turning sign will denote status of vehicle. Sign to indicate at all times the exact status of the vehicle, whether engaged or unengaged."

A supply of iron signs of the above description has now been received, and may be procured in person or by mail for $1 each from the Division of Civil Affairs (room 301, Administration Building, Balboa Heights). If request is made for a sign by mail, the applicant should state his post-office address, and all remittances should be made by registered letter, money order, or check. All checks or money orders should be made payable to the Collector, The Panama Canal, Balboa Heights.

Appointments in the Regular Army.

After the selection of the successful candidates who took the examination April 25, 1921, for appointment in the Regular Army there will remain more than 3,000 vacancies in the commissioned personnel of the Army. After promotions under the reorganization law have been completed a number of these vacancies will be in the grade of first lieutenant, the remainder being in the grade of second lieutenant. While it is not proposed to fill all vacancies at present, the necessity for more officers for the Army requires that a portion of the vacancies be filled without delay. An examination for the appointment as second lieutenants will, therefore, be held August 22,

1921. The exact number of vacancies for which examination will be held will be announced later. Appointments will be made in each of the following branches:

Infantry.	Engineers.	Ordnance Department.
Cavalry.	Air Service.	Chemical Warfare Service.
Field Artillery.	Signal Corps.	
Coast Artillery.	Quartermaster Corps.	Philippine Scouts.

As a result of this examination no appointments are to be made in branches of the service other than those named above.

The date announced is that of the final examination. Prior to that date applications must be submitted and applicants must undergo a preliminary examination. All applications are to be received and acted upon by corps area commanders who are also charged with conducting the preliminary and final examinations. Details of information concerning examinations for appointment are contained in regulations now being distributed, and application blanks should be obtained at any military post or station. Applications should be submitted by the applicant at the military post or station nearest his place of residence. Writing to the Adjutant General for information or for blanks will only cause delay.

It is contemplated that successful candidates will be announced and appointed, or nominated for appointment, about 2 months after the examination.

All successful candidates will be arranged in their order of merit as determined by the final examination and will be appointed in the Army in such order. They will also be placed on the promotion list in such order without regard to the branch of the Army in which appointed. Those candidates who attain the highest marks on examination will, therefore, have priority in advancement to the vacancies existing as first lieutenant. To be informed of the full detail concerning examinations and appointment, it is necessary that candidates consult the regulations which are being sent to all military posts and stations. However, the prospective candidate's attention is directed to the following important points:

1. Eligibility for appointment is fixed by law and requests for exceptions can not, therefore, receive consideration by the War Department. The age at the time of appointment must be between 21 and 30 years, and a candidate must be a citizen of the United States. At the time of the final examination each candidate must be in one of the following classes:

(*a*) A warrant officer or enlisted man of the regular Army having had not less than 2 years' service as such.

(*b*) A member of the Officers' Reserve Corps or the enlisted Reserve Corps.

(*c*) A member of the National Guard.

(*d*) A graduate of a technical institution approved by the Secretary of War.

Any civilian of the required age who passes the preliminary examination may readily become eligible to take the final examination and to be appointed by entering either class (*b*) or (*c*) above.

2. The preliminary examination consists merely of an inquiry into the physical, moral, and mental qualifications of an applicant to determine whether or not he has the requisite qualifications to justify his proceeding with the final examination. Such a preliminary examination will avoid inconveniences and unnecessary expenses to both the applicant and the Government in many cases. Facilities for conducting these preliminary examinations at selected educational institutions prior to graduation will be provided by corps area commanders.

3. The final examination is the same for all candidates and to insure strict justice to all, the examination papers will be marked by central boards convened in the War Department. The scope of the mental examination is such as to insure the Army of getting men of the requisite educational foundation to satisfactorily follow a career as an Army officer. The elementary part of this examination embraces the subjects of history, grammar, geography, arithmetic, algebra, geometry, trigonometry, and physics. The advanced part of the examination consists of a large number of subjects including mathematics, languages, literature, electricity, chemistry, law, and minor tactics. Examination is required in but three of the subjects of the advanced group to be selected by the candidate.

4. Candidates for appointment in the Air Service, Engineers, Signal Corps, and Ordnance Department are required to satisfy certain technical requirements, either by examination or by having graduated from technical schools.

5. The regulations provide liberal exemptions from examination in various subjects according to the education, training, and experience that the candidate has had. The granting of exemptions has been placed entirely in the hands of the examining boards and requests for exemption can not, therefore, be considered by the War Department.

6. Each candidate is permitted to express one or two choices of the branch of the service in which he desires to be appointed. In making appointments, however, while the preferences of candidates will be given due consideration the War Department reserves the right to assign them to such branches of the service as may be necessary.

In consideration of all facts it is apparent that the present offers an exceptional opportunity for appointment in the Army. The candidates making the highest mark will be at once promoted to the grade of first lieutenant and will thus receive a base pay of $2,000 per annum in addition to the prescribed allowances; those appointed as second lieutenants will receive a base pay of $1,700 per annum in addition to the prescribed allowances.

Should a number of candidates, in excess of those for which the examination is held, receive a passing mark on examination, those making the lowest mark will not be selected for appointment nor will they be placed on an eligible list for future appointment, as the experience of the War Department has been that such eligible lists are unsatisfactory, both to the Government and to the individual.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z. (telephone 286):

Aid (male and female); $1,200 a year; form 1312; announcement No. 311; age, 21 but not 30 years; vacancies in Lighthouse Service, Third District, Tompkinsville, N. Y., July 12, 1921.[1]

Anesthetist (male and female); $1,200 a year; form 1312; announcement No. 317; age, 21 years and over; vacancies in Freedmen's Hospital, Washington, D. C.; June 28, 1921.[1]

Assistant in nematology (male and female); $1,000 to $1,800 a year; form 2118; announcement No. 303; age, 21 but not 70 years; vacancies in Bureau of Plant Industry, Department of Agriculture, Washington, D. C.; July 12, 1921.[1]

Examiner (male and female); $4,500 a year; form 1312; announcement No. 302; age, below 70 years; vacancies in United States Railroad Labor Board, Chicago, Ill., July 5, 1921.[1]

Graphotype operator (male and female); $660 to $1,200 a year; forms 304 and 2357; announcement No. 305; age, 18 but not 70 years; vacancies in Departmental Service, Washington, D. C.; July 6, 1921.

Laboratory helper, $900 to $1,080 a year; laboratory aid, $720 to $900 a year (male and female); form 1312; announcement No. 301; age, below 60 years; vacancies in Bureau of Mines, Department of the Interior, Washington, D. C.; July 6, 1921.

Manual training teacher (male and female); $900 to $1,100 a year; form 1312; announcement No. 312; age, 21 but not 50 years; vacancies at Flandreau Indian School, South Dakota, July 20, 1921.

[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that date.

Deceased and Insane Employees.

The estates of the following deceased or insane employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

DECEASED.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
George Gibson	29709	Barbados	Colon	Mun. Eng. Div	May 25, 1921.
Cyril Ruiz, *alias* Reese	30074	Panama	Panama	Health Department	May 26, 1921.
George Monroe	31028	Jamaica	Colon	Health Department	May 21, 1921.
Joseph Benj. Thomas	37738	Barbados	Panama	R. and F. Agency	March 20, 1921.
Bocento (Busat) Singh	22728	India		Coaling station	May 24, 1921.
Andrew G. Hill	3616	United States	Colon	Panama Railroad	June 16, 1921.
Theodore Voitier	34892	Martinique	Red Tank	Mun. Eng. Div	June 12, 1921.

INSANE.

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of commitment.
Victor Felix	22859	Guadeloupe	Camp Bierd	Coaling station	May 14, 1921.
Frederick Ensminger	29063	France	Mount Hope	Mun. Eng. Div	May 6, 1921.

Official Circulars.

Act of Congress.—Certain Acts of Congress, Joint Resolutions, and Proclamations Shall be Construed as if the War Had Ended and the Present or Existing Emergency Expired.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 1, 1921.

CIRCULAR No. 600-79.

The Act of Congress quoted below is published for the information of all concerned.

JAY J. MORROW,
Governor.

JOINT RESOLUTION Declaring that certain Acts of Congress, joint resolutions, and proclamations shall be construed as if the war had ended and the present or existing emergency expired.

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That in the interpretation of any provision relating to the duration or date of the termination of the present war or of the present or existing emergency, meaning thereby the war between the Imperial German Government and the Imperial and Royal Austro-Hungarian Government and the Government and people of the United States, in any Acts of Congress, joint resolutions, or proclamations of the President containing provisions contingent upon the duration or the date of the termination of such war or of such present or existing emergency, the date when this resolution becomes effective shall be construed and treated as the date of the termination of the war or of the present or existing emergency, notwithstanding any provision in any Act of Congress or joint resolution providing any other mode of determining the date of such termination. Any Act of Congress, or any provision of any such Act, that by its terms is in force only during the existence of a state of war, or during such state of war and a limited period of time thereafter, shall be construed and administered as if such war between the Governments and people aforesaid terminated on the date when this resolution becomes effective, any provision of such law to the contrary notwithstanding; excepting, however, from the operation and effect of this resolution the following Acts and proclamations, to wit: Title 2 of the Act entitled "The Food Control and District of Columbia Rents Act," approved October 22, 1919 (Forty-first Statutes, page 297), the Act known as the Trading with the Enemy Act, approved October 6, 1917[1] (Fortieth Statutes, page 411), and all amendments thereto, and the First, Second, Third, and Fourth Liberty Bond Acts, the Supplement to the Second Liberty Bond Act, and the Victory Liberty Loan Act; titles 1 and 3 of the War Finance Corporation Act (Fortieth Statutes, page 506), as amended by the Act approved March 3, 1919 (Fortieth Statutes, page 1313), and Public Resolution Numbered 55, Sixty-Sixth Congress, entitled "Joint resolution directing the War Finance Corporation to take certain action for the relief of the present depression in the agricultural sections of the country, and for other purposes," passed January 4, 1921; also the proclamations issued under the authority conferred by the Acts herein excepted from the effect and operation of this resolution: *Provided, however*, That nothing herein contained shall be construed as effective to terminate the military status of any person now in desertion from the military or naval service of the United States, nor to terminate the liability to prosecution and punishment under the selective service law, approved May 18, 1917 (Fortieth Statutes, page 76), of any person who failed to comply with the provisions of said Act, or of Acts amendatory thereof: *Provided further*, That the Act entitled "An Act to amend section 3, title 1, of the Act entitled 'An Act to punish acts of interference with foreign relations, the neutrality, and the foreign commerce of the United States, to punish espionage, and better to enforce the criminal laws of the United States, and for other purposes,' approved June 15, 1917[2] (Fortieth Statutes, page 217), and for other purposes," approved May 16, 1918[3] (Fortieth Statutes, page 553), be, and the same is hereby repealed, and that said section 3 of said Act approved June 15, 1917, is hereby revived and restored with the same force and effect as originally enacted.

Nothing herein contained shall be held to exempt from prosecution or to relieve from punishment any offenses heretofore committed in violation of any Act hereby repealed or which may be committed while it remains in force as herein provided.

Approved, March 3, 1921.

[1] Published as Panama Canal Circular No. 600-43.

[2] Published as Panama Canal Circular No. 600-40.

[3] Published as Panama Canal Circular No. 600-48.

Executive Order.—Maximum Pay for Non-Civil Service Clerks.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 9, 1921.

CIRCULAR No. 601-122:

The extracts from an Executive Order quoted below are published for the information of all concerned.

JAY J. MORROW,
Governor.

The Joint Resolution of March 3, 1921,[1] declaring that certain Acts of Congress, joint resolutions, and proclamations shall be construed as if the war with Germany and Austria-Hungary had ended and the present or existing emergency expired, provides, among other things, that in interpreting the provisions relative to the duration or termination of the war "the date when this resolution becomes effective shall be construed and treated as the date of the termination of the war or of the present existing emergency." Therefore, all Executive Orders and amendments to the civil service rules authorizing appointments, promotions or removals without full compliance with the civil service laws and rules, because of war emergencies existing at the time, are hereby revoked.

A list of the orders revoked by this Order is as follows, to wit:

* * * * * * *

45. Executive Order of November 16, 1918,[2] amending Schedule A, Subdivision 1, paragraph 15, to permit appointments to clerical positions in the Federal service on the Isthmus of Panama at not more than $106 a month, without examination, during the unusual conditions due to the war, and to continue not longer than 6 months from the end of the war. This amendment raised the salary at which appointments could be made, without examination, from $75 a month to $106 a month.

Employees appointed under the orders which are hereby revoked, serving in positions which are permanent under peace conditions, shall not hereby be given a competitive classified status, but may, in the discretion of the head of the department or independent establishment where now employed, continue in their present excepted status and in their present positions or such allied positions as the Commission may approve.

WARREN G. HARDING.

THE WHITE HOUSE,
May 16, 1921.

[1] Published as Panama Canal Circular No. 600-79.

[2] Published as Panama Canal Circular No. 601-85.

Executive Order.—Passport Visa Not Required for Temporary Stop-overs.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 10, 1921.

CIRCULAR No. 601-121:

The Executive Order quoted below is published for the information of all concerned.

JAY J. MORROW,
Governor.

Amending the Executive Order of August 8, 1918, to permit temporary stop-overs at ports of the United States without the requirement of visaed passports.

By virtue of the authority vested in me by the Act approved May 22, 1918,[1] entitled "An Act to Prevent in Time of War Departure from and Entry into the United States Contrary to the Public Safety," I, Warren G. Harding, President of the United States of America, hereby amend the Executive Order of August 8, 1918,[2] relating to the "Rules and Regulations Governing the Issuance of Permits to Enter and Leave the United States," by the following provision:

Aliens who are passengers on vessels calling, while en route to foreign destinations, at ports of the United States, including outlying territories and insular possessions, may be allowed to land at these ports without visaed passports, provided that they land merely for the limited periods of time during which the vessels may lie over at the ports mentioned, and provided also, that they continue their voyages on the same vessels. These exceptions are made for the benefit of passengers who desire to land temporarily for purposes of sightseeing or other legitimate objects. Aliens landing with the intention of remaining for a longer period are required to present visaed passports. It will be the duty of the masters of the vessels to satisfy the Immigration authorities that passengers who obtain permission to land temporarily will not remain on shore after the departure of the vessels. Appropriate instructions upon this subject will be sent by the Department of Labor to Immigration officials at seaports. The names of all passengers of the class mentioned who fail to reembark and continue their voyages shall be reported by the Immigration authorities at the ports to the Department of Labor and the Department of State, for appropriate action.

WARREN G. HARDING.

THE WHITE HOUSE,
May 12, 1921.

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[1] Published as Panama Canal Circular No. 600-49 (provides that the term "United States" includes the Canal Zone).

[2] Published as Panama Canal Circular No. 601-79.

Acting General Secretary, Clubs and Playgrounds.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 13, 1921.

All concerned—Effective this date and during the absence on leave of Mr. T. S. Booz, Mr. A. J. Scott will act as General Secretary, Bureau of Clubs and Playgrounds, in addition to his regular duties.

JNO. H. SMITH,
Acting Executive Secretary.

Storage of Reserve Equipment.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., June 11, 1921.

All concerned—A storage shed for reserve equipment has been erected at Mount Hope where all such equipment will be stored for reissue. All equipment turned in must be passed on by the Board of Appraisal and will be carried under commodity class No. 152 at the appraised price. Requisitions for such equipment will be filled at appraised prices.

R. K. MORRIS,
Chief Quartermaster.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., June 13, 1921.

Insufficiently addressed mail matter for the following has been received in the office of the Director of Posts and may be obtained upon request of the addressee. Request for forwarding may be made by telephone, calling Balboa No. 182:

Casanover, Mrs. C. F.
Cavanaugh, Frank
Cowdrill, Mabel M.
Daniels, George
Douglas, Horatio
Faby, Mrs. M. E.
Haines, John B.
Huggins, William
Ingram, R. N., Box 1081
Johnston, G. Zacchus
King, Mrs. Elizabeth E.
Kohler, F. H., Box 487
Ladd, Eduardo
Lapoint, Mr.
McCarty, Haskell
Pablo, Juan J.
Parker, Box 413[1]
Pace, Stanley
Payne, D.
Napper, J. W.
Neal, Floyd
Quiroz, Emilio
Ridguard, Cecil
Roberts, Ralph
Rodriguez, Rev. L.
Ramsey, Theo.
Reynolds, Mrs. George
Spiru, John
Stall, J. E.
Turner, F. B.
Wilson, Lyle[1]
Wilcox, Geo. R.
Robles, D. C.[2]

[1] Paper. [2] Package.

May Rainfall for Three Years.

STATIONS.	INCHES. 1919	1920	1921	Station average.	Years of record.	Rainy days, 1921.
Pacific section:						
Balboa	5.92	2.24	8.28	7.83	23	18
Balboa Heights	5.21	3.31	8.60	8.24	23	19
Miraflores	6.07	4.38	7.78	9.08	13	20
Pedro Miguel	7.37	7.45	8.72	10.23	14	17
Rio Grande	6.35	7.38	5.85	10.07	17	21
Central section:						
Culebra	6.90	6.78	6.12	10.69	30	15
Camacho	5.08	9.27	5.83	10.60	15	20
Empire	7.01	7.66	7.28	9.63	17	20
Gamboa	5.82	7.59	5.89	10.50	40	22
Juan Mina	7.77	3.98	4.43	9.41	11	14
Alhajuela	6.11	4.46	10.76	11.51	21	20
Vigia	4.30	6.07	8.07	10.66	13	21
Frijoles	8.28	4.02	10.73	10.65	10	....
Trinidad	7.28	9.31	6.24	12.28	14	23
Monte Lirio	5.20	6.34	9.76	11.86	14	19
Atlantic section:						
Gatun	7.16	2.65	14.08	13.27	17	23
Brazos Brook	8.71	4.99	11.84	12.67	15	19
Colon	6.95	5.48	13.61	12.48	51	18
Bocas del Toro	9.98	6.93	3.61	10.35	13	7

Empty Barrels and Packing Cases for Sale.

Address inquiries to Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z.

Sale of Lumber.

The Panama Canal has on hand at Balboa storehouse considerable quantities of 1″ x 6″, 1″ x 8″, and 1″ x 10″ dressed lumber, Douglas fir, grade 1, select common. Further information will be furnished by General Storekeeper, Balboa, or at office of Chief Quartermaster, Balboa Heights.

Rainfall from May 1 to May 31, 1921, Inclusive.

STATIONS.	Maximum in 1 day.	Date.	Total.
Pacific section:	*Ins.*		*Ins.*
Balboa	2.56	15	8 28
Balboa Heights	3.01	15	8.60
Miraflores	2.38	23	7.78
Pedro Miguel	1.96	23	8.72
Rio Grande	1.50	12	5 85
Central section:			
[1] Culebra	2.00	12	6 12
[1] Camacho	1.10	12	5.83
Empire	2 16	12	7 28
Gamboa	2.29	23	5.89
[1] Juan Mina	1.56	24	4 43
Alhajuela	2 82	23	10.76
Vigia	1.59	30	8.07
[1] Trinidad	1.53	26	6 24
[1] Monte Lirio	2.21	23	9.76
Atlantic section:			
Gatun	2.54	22	14.08
[1] Brazos Brook	2.05	24	11.84
Colon	4.30	23	13.61
[1] Bocas del Toro	1.17	23	3.61

[1] Standard rain gauge—readings at 5 p. m. daily.
[2] Standard rain gauge—readings at 8 a. m. daily.
Automatic rain gauge at unstarred stations—values, midnight to midnight.

Sale of Typewriters.

The Panama Canal has for sale a number of used Underwood typewriters at reasonable prices. Some of these machines are at Balboa storehouse and others at Cristobal storehouse, where they may be inspected and purchased direct.

Eggs for Setting.

For a limited period only purchases of eggs for setting may be made at the Summit poultry farm at the following prices:

White Leghorn or Rhode Island Red, per setting of 15 eggs, $3; two settings, or 30 eggs, $5.50.

All sales f. o. b. Summit.

Additions to Commissary Stock.

Dry Goods Section.

Lace, edging, cotton val., French, yd. $0.09, .11, and .14
Perfumes, Piver's:
Essence, Cyclamen Neige, bot. 73
Essence, Scarabee, bot. 5.05
Essence, Velivol, bot. 4.55
Rugs, steamer, ea. . $11.00, $13.20, $14.90, $16.75

Grocery Section.

Cigarettes, 111's, pkg. 11
Rhubarb, 3s tin. 47

Schedule of Official Jitney Service.

Following is the schedule of the official jitney plying between Balboa shops and the Ancon police station, carrying employees in the conduct of official business, upon presentation of passes issued by the Chief Quartermaster or of the "special pass" issued by the Governor:

FROM ANCON POLICE STATION TO BALBOA SHOPS.

Police Station	Leave on the hour and half hour.
Administration Building	Leave 7 minutes and 37 minutes after the hour.
Balboa Commissary	Leave 10 minutes and 40 minutes after the hour.
Balboa shops	Arrive 15 minutes and 45 minutes after the hour.

FROM BALBOA SHOPS TO ANCON POLICE STATION.

Balboa shops	Leave 15 minutes and 45 minutes after the hour.
Port Captain's Office	Leave 18 minutes and 45 minutes after the hour.
Balboa Commissary	Leave 20 minutes and 50 minutes after the hour.
Administration Building	Leave 25 minutes and 55 minutes after the hour
Ancon Police Station	Arrive on the hour and half hour.

Route Service Jitney—Cristobal-Mt. Hope.

The following is the schedule of the official jitney service between the Terminal building at Cristobal and Mount Hope. Cars stop at the office of the Commissary Division each way:

Leave Terminal Building.		Leave Mount Hope.	
A. M.	P. M.	A. M.	P. M.
8.00	12.30	8.15	12.45
8.30	1.00	8.45	1.15
9.00	1.30	9.15	1.45
9.30	2.00	9.45	2.15
10.00	2.30	10.15	2.45
10.30	3.00	10.45	3.15
	3.30		3.45

Schedule of the Ancon-Balboa Bus Line.

Leave Ancon clubhouse 3 p. m., 3.30 p. m., 4 p. m., and every 15 minutes thereafter until 10.45 p. m.

Leave Balboa clubhouse 2.45 p. m., 3.15 p. m., 3.45 p. m., and 4.15 p. m., and every 15 minutes thereafter until 10.30 p. m. There will be no 10.45 p. m. bus from Balboa, but one will leave at 11 p. m.

Taboga Launch Schedule.

	A. M.
From dock No. 19, Balboa every day, including Sundays and holidays...	10.30
	P. M.
Saturdays and days preceding holidays	5.00
From Taboga:	P. M.
Week days	12.30
Sundays and holidays	6.30

COMMISSARY NOTES.

Books.

Books received:

"The Man Who Understood Women," by Leonard Merrick; "Peace Negotiations," by Robert Lansing; "The Mountebank," by William J. Locke; "Huckleberry Finn," by Mark Twain; "The Art of Lawn Tennis," by W. T. Tilden; "The Garden of Bright Waters," by Edward Powys Mathers.

Hardware.

A number of items which have been out of stock for a short time in the hardware sections have been received and are on sale at all retail stores. These are double bed springs, electric chafing dishes, electric grills, electric bulbs, Dietz hand lanterns, Silicon Cream Polish, scissors, measuring glasses, ice picks.

Honey.

The commissaries are now selling an excellent grade of honey, which is obtained from apiaries located in the Canal Zone. The product is guaranteed by the Panama Bee Keepers' Association and is extracted, packed, and handled in accordance with the most modern and sanitary methods. For a quart bottle $1.07 is asked, with refund of 7 cents for return of the container.

Chinaware.

From the Commissary's London connection, information has been received that the coal strike caused all the potteries in England to cease operation because of lack of fuel. As a consequence, orders for chinaware of all makes will unavoidably be delayed but promises have been secured from manufacturers to give commissary orders special attention when the works reopen, which, it is hoped, will be at an early date.

Steamer Rugs.

The great number of calls recently received for steamer rugs exhausted the stock in all commissaries. A new shipment just received contains, it is believed, even more attractive patterns than those formerly offered. These rugs are guaranteed of pure wool. They come in rich browns and distinctive greens, with narrow stripes in various colors and in attractive tartan plaids.

Many of the rugs are 72 by 90 inches, large enough to cover a bed of ordinary dimensions. Some have a smooth, plain surface and others are rough finished. The line is varied and the values excellent.

Price Reduction—Books.

The price of "Domestic Science—Principles and Application," by Pearl L. Bailey has been reduced from $1.30 to 95 cents. Although its primary purpose is as a textbook in acquainting pupils in domestic science courses with kitchen utensils and cooking processes in general, there is much in this book of value to every housewife. Cooking by different fuels is discussed and the proper preparation of fruits and vegetables, cereals, doughs for bread and biscuits, meats, fish, poultry, sandwiches, salads, frozen desserts, etc., is given. There are many excellent recipes and attractive menus. Home management and household accounts also come in for attention and a special chapter is devoted to invalid cookery. Even at the original price this book was well worth the sum asked.

PANAMA RAILROAD PASSENGER TRAIN TIME-TABLE No. 32, EFFECTIVE JUNE 1, 1921.

MAIN LINE STATIONS.		Sunday only.	Sat'day only.	DAILY.		
		11	9	7	5	3
Leave		P. M.	P. M.	P. M.	A. M.	A. M.
Colon	.....	9.35	11.30	5.00	11.00	7.10
Mount Hope	.....	9.40	11.35	5.05	11.05	7.15
Fort Davis	.....	9.49	11.44	5.14	11.14	7.24
Gatun	.....	9.54	11.49	5.19	11.19	7.29
			A. M.			
Monte Lirio	.....	10.09	12.04	5.34	11.34	7.44
Frijoles	.....	10.19	12.15	5.45	11.45	7.55
Darien	.....	10.26	12.22	5.52	11.52	8.00
					P. M.	
Gamboa	.....	10.37	12.33	6.04	12.04	8.16
Summit	.....	10.49	12.45	6.16	12.16	8.32
Pedro Miguel	.....	11.01	12.57	6.26	12.28	8.46
Red Tank	.....	11.04	1.00	6.28	12.31	8.49
Miraflores Locks	.....	11.09	1.05	6.32	12.35	8.53
Fort Clayton	.....	11.11	1.07	6.35	12.38	8.56
Corozal	.....	11.14	1.10	6.40	12.44	9.00
Balboa Heights	.....	11.20	1.15	6.45	12.50	9.05
Panama	.....	11.25	1.20	6.50	12.55	9.10
Arrive		P. M.	A. M.	P. M.	P. M.	A. M.
		11	9	7	5	3

MAIN LINE STATIONS.	DAILY.			Sat'day only.	Sunday only.	
	4	6	8	10	12	
Leave	A. M.	A. M.	P. M.	P. M.	P. M.	
Panama	7.10	11.00	5.00	11.30	9.35	.....
Balboa Heights	7.15	11.05	5.05	11.35	9.40	.....
Corozal	7.21	11.12	5.10	11.41	9.46	.....
Fort Clayton	7.25	11.16	5.14	11.44	9.49	.....
Miraflores Locks	7.28	11.19	5.17	11.46	9.51	.....
Red Tank	7.32	11.22	5.21	11.49	9.54	.....
Pedro Miguel	7.36	11.25	5.25	11.53	9.58	.....
				A. M.		
Summit	7.48	11.37	5.37	12.05	10.10	.....
Gamboa	8.00	11.49	5.49	12.17	10.22	.....
Darien	8.09	11.59	5.59	12.28	10.32	.....
		P. M.				
Frijoles	8.17	12.07	6.07	12.35	10.39	.....
Monte Lirio	8.29	12.19	6.18	12.46	10.50	.....
Gatun	8.44	12.34	6.34	1.01	11.05	.....
Fort Davis	8.48	12.38	6.38	1.03	11.08	.....
Mount Hope	8.55	12.45	6.45	1.10	11.15	.....
Colon	9.00	12.50	6.50	1.15	11.20	.....
Arrive	A. M.	P. M.	P. M.	A. M.	P. M.	.....
	4	6	8	10	12	

All trains stop where time is shown.

Sunday only	DAILY			Daily except Sunday	DAILY			
67	65	63	61	59	57	55	53	51
A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.	A. M.	A. M.
12.30	11.05	7.30	5.30	3.30	1.00	10.00	7.45	6.10
12.32	11.07	7.32	5.32	3.32	1.02	10.02	7.47	6.12
12.34	11.09	7.34	5.34	3.34	1.04	10.04	7.49	6.14
12.37	11.12	7.37	5.37	3.37	1.07	10.07	7.52	6.17
12.43	11.18	7.43	5.43	3.43	1.13	10.13	7.58	6.23
12.49	11.24	7.49	5.49	3.49	1.19	10.19	8.04	6.29
12.55	11.30	7.55	5.55	3.55	1.25	10.25	8.10	6.35
A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.	A. M.	A. M.
67	65	63	61	59	57	55	53	51

FORT RANDOLPH BRANCH STATIONS		DAILY				Daily except Sunday	DAILY			Sunday only
		52	54	56	58	60	62	64	66	68
Leave	**Arrive**	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.
Third Street, Colon		7.05	8.40	10.55	1.55	4.25	6.25	8.25	11.59	1.25
Seventh Street		7.03	8.38	10.53	1.53	4.23	6.23	8.23	11.57	1.23
Cristobal Commissary		7.01	8.36	10.51	1.51	4.21	6.21	8.21	11.55	1.21
Tower "B"		6.58	8.33	10.48	1.48	4.18	6.18	8.18	11.53	1.18
France Field		6.50	8.25	10.40	1.40	4.10	6.10	8.10	11.45	1.10
Coco Solo Station		6.45	8.20	10.35	1.35	4.05	6.05	8.05	11.40	1.05
Fort Randolph		6.40	8 15	10.30	1.30	4.00	6.00	8.00	11.35	1.00
Arrive	**Leave**	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.
		52	54	56	58	60	62	64	66	68

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Volume XIV. Balboa Heights, C. Z., June 29, 1921. No. 46.

Cash Balance in Appropriations—May, 1921.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 25, 1921.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: Herewith is a report showing the commissary sales, financial receipts, and expenditures, and of the cash balance available in The Panama Canal appropriations, as compared with the preceding month, and with the corresponding month of last year:

	May, 1921.	April, 1921.	May, 1920.
Cash balance available for expenditure:			
In Canal appropriations	[1] $7,051,969.56	[1] $8,020,685.58	[1] $12,372,395.10
In fortification funds allotted to The Panama Canal for expenditure	[1] 473,781.75	[1] 473,781.75	[1] 5,728,754.53
Payments made from appropriations:			
By the Paymaster on the Isthmus	1,416,780.45	1,570,092.07	1,668,341.86
By the Disbursing Clerk, Washington, D. C.	542,139.41	737,709.52	479,713.02
To the Panama Railroad Company for commissary books	279,967.38	307,802.49	368,390.84
Classification of collections on the Isthmus:			
Repaid to appropriations	864,120.60	1,031,281.31	1,216,861.27
Commissary and other trust funds	281,797.79	309,877.44	369,262.12
Tolls	835,914.57	928,007.79	828,476.21
Sales of water	6,930.25	14,430.50	4,324.55
Postal receipts	9,007.50	10,617.87	8,869.14
Licenses, taxes, court fees, fines, etc.	3,614.56	4,381.83	5,859.18
Sales of obsolete material and equipment	1,350.00	.....	15,625.00
Total collections on the Isthmus	2,002,735.27	2,298,596.74	2,449,277.47
Collections by the Disbursing Clerk, Washington	1,682.49	127,292.71	130,877.48
Deposits with the Assistant Treasurer, United States	33,600.00	49,700.00	63,249.00
Canal Zone and miscellaneous funds:			
Receipts	175,428.77	207,781.18	192,290.08
Disbursements	210,427.73	263,446.81	238,052.25
Pay rolls on the Isthmus	1,124,055.54	1,206,223.67	1,311,979.79
Requisitions for purchases in the United States	115,807.91	238,996.12	766,138.34
Sales of commissary supplies:			
To The Panama Canal	100,507.44	227,727.43	134,321.71
To steamships, other than those of the United States Government and the Panama Railroad Steamship Line	45,385.75	53,432.69	80,338.78
To the Panama Railroad, including its steamships and the Hotel Washington	15,672.15	20,056.27	39,969.74
To the United States Government, including the Army and Navy	128,012.49	134,007.10	226,441.56
To individuals and companies, mainly through charge accounts	21,899.98	26,036.10	30,127.25
To individuals purchasing coupons	430,276.92	484,426.83	614,716.07
Total commissary sales	741,754.73	845,686.73	1,125,915.11

[1] Balance on last day of month.

Respectfully,

JAY J. MORROW,
Governor.

Postal Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight June 25, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Paparoa	18	21.10	19	6.10	19	13.10	19	14.15	British	New Zealand Shipping Co.	430.0	54.0	24.0	London	Auckland	General	2,746	8,174	6,092
Mexican	19	4.45	19	7.23	19	14.09	19	15.20	American	American Hawaiian Line	472.0	57.0	19.0	New York	Los Angeles	General	1,995	9,258	6,912
West Hepburn	14	20.45	19	8.08	19	16.10	19	20.55	American	U. S. and A. Lines (S. B.)	410.0	54.0	24.1	New York	Auckland	General	7,351	6,693	4,915
Ruahine	19	21.09	20	7.05	20	14.44	20	16.00	British	New Zealand Shipping Co	480.0	60.0	25.0	London	Auckland	General	1,672	11,197	8,322
City of Canton	20	7.30	20	7.45	20	14.53	20	18.20	British	Hall Steamship Line	451.0	57.0	28.6	New York	Shanghai	General	9,120	8,127	6,134
Balboa	17	19.35	20	8.10	20	15.20	20	16.15	American	Colombian Maritime Co	190.0	29.0	10.1	Cristobal	Buenaventura	Ballast		741	350
Astmahco III [2]	20	10.35	20	10.55	20	17.09	20	20.55	American	Astoria Mahogany Co	250.0	43.0	16.9	Baltimore	Punta Arenas	Coal and coke	1,745	2,425	1,635
Quilpue	19	3.00	21	6.12	21	13.39	21	17.20	British	Pacific Steam Navigation Co	361.0	46.0	19.5	New York	Chile	General	882	4,742	3,023
Jamaica	17	21.30	21	6.20	21	13.29	21	17.30	British	Pacific Steam Navigation Co	220.0	34.0	14.5	Pto. Colombia	Tumaco	General	620	1,187	622
K.R. Kingsbury	20	21.33	21	6.30	21	11.09	21	15.00	American	Standard Oil Co	410.0	58.0	27.0	Tampico	San Francisco	Oil	10,000	9,033	5,938
Manavi	15	18.55	21	10.50	21	17.04	21	18.24	British	Pacific Steam Navigation Co	216.0	35.0	12.0	Cristobal	Guayaquil	General	92	1,357	884
Eastern Cloud	21	12.05	21	13.15	21	20.19	22	7.43	American	Barber Line (S. B.)	385.0	51.0	26.7	New York	Darien	Oil	7,320	6,242	4,471
Robin Adair	21	13.08	21	13.37	21	22.40	23	8.06	American	Robin Steamship Line	425.0	55.0	27.3	New York	Seattle	Steel and general	9,086	7,470	5,618
Mesopotamia	21	23.50	22	6.40	22	13.48	22	15.30	British	Westminster Shipping Co	380.0	50.0	20.0	New York	Yokohama	General	3,910	4,846	3,502
Schodack	21	16.57	22	7.50	22	14.29	22	15.15	American	Barber Line (S. B.)	390.0	54.0	25.6	New York	Shanghai	Petroleum	6,460	6,106	4,401
Elm Leaf	22	7.05	22	8.10	22	15.05			British	Anglo-Saxon Petroleum Co	418.0	55.0	25.0	New Orleans	Balboa	Fuel oil	7,183	6,841	4,299
Yalza	22	3.10	22	10.12	22	17.52	22	19.05	American	N. Atl. & West. S. S. Co. (S. B.)	401.0	55.0	15.6	Boston	Los Angeles	General	1,000	6,529	4,737
Wm. G. Warden	22	18.25	23	6.35	23	14.54	23	16.10	American	Standard Oil Co	500.0	68.0	28.0	Mata Redondo	Ioco, B. I.	Oil	12,857	10,503	8,409
Belridge	23	6.17	23	6.55	23	15.05	23	19.52	Norwegian	W. Wilhelmsen	425.0	57.0	26.6	Tampico	Tocopilla	Petroleum	9,250	7,065	5,095
Anniston City	23	6.51	23	8.05	23	15.40	23	16.25	American	U. S. Steel Products Co	424.0	56.0	27.2	Mobile	Seattle	Steel and general	7,969	7,539	5,448
Andrea F. Luckenbach	22	17.09	23	8.45	23	16.48	23	17.55	American	Luckenbach Line	496.0	68.0	18.1	Philadelphia	San Francisco	General	4,000	11,487	8,732
Stanley Dollar	23	2.15	23	10.30	23	17.31	23	18.35	American	Dollar Line	289.0	44.0	27.6	Baltimore	San Francisco	Steel and general	3,180	3,460	2,404
Laura C. Hall [3]	23	14.13	24	6.15	24	14.21	26	8.54	British	Pacific Metals Corporation	81.0	25.0	9.6	Cristobal	Buenaventura	General	30	130	69
Gen. Graham [3]			24	8.25	24	14.20			American	United States Army				Cristobal	Balboa				
Balboa [2]	24	18.06	25	6.17	25	12.46	25	19.15	Swedish	Johnson Line	440.0	56.0	19.8	Gottenburg	Callao	General	2,901	7,480	5,533
Argyll	24	22.45	25	6.50	25	15.24	25	16.45	French	Compagnie du Boleo	320.0	41.0	24.6	Tampico	Santa Rosalia	Crude oil		3,141	2,096

[2] Motor ship. [2] Motor schooner. [3] Mine planter.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

O-12 [4]	17	14.48	19	7.40	19	13.05			American	United States Navy	175.0	16.4		High seas	Cristobal				
O-14 [4]	17	14.48	19	7.40	19	13.05			American	United States Navy	175.0	16.4		High seas	Cristobal				
Piako	19	10.00	19	12.03	19	18.35	19	18.35	British	New Zealand Shipping Co	462.0	58.2	24.6	Lyttleton	England	General, frozen	4,760	8,459	6,060
Chepadoa	19	20.00	20	6.51	20	14.24	20	15.10	American	U. S. and A. Lines (S. B.)	402.4	53.1	21.0	Sydney	New York	(5)	5,344	6,577	4,944
Cedar Branch	20	6.00	20	7.38	20	15.50	21	6.15	British	F. & W. Ritson	390.5	51.0	21.0	Valparaiso	Liverpool	(6)	4,946	4,911	3,642
Selandia	20	0.01	20	14.32	20	22.06	20	22.06	Danish	East Asiatic Co	370.4	53.2	22.6	Valparaiso	Copenhagen	General	6,340	5,441	4,090
San Juan	20	13.00	21	6.29	21	14.15			American	Pacific Mail Steamship Co	283.0	37.0	17.0	San Francisco	Cristobal	(7)	1,575	2,379	1,593

[4] Submarine. [5] General, and chrome ore. [6] Sugar, cotton, cotton seed, oil cake, barley, oats, metals, etc. [7] Coffee, hides, and hardwood.

Santa Teresa	21	12.15	21	8.05	21	14.40	21	17.30	American	W. R. Grace & Co.	360.2	51.6	24.0	Iquique	New York	General	4,250	5,726	4,086
Targis	21	2.00	21	8.39	21	17.00	21	18.44	German	Holland Line	267.0	42.0	17.2	Valparaiso	Hamburg	General	2,660	2,174	1,320
Eelbeck	11	6.00	21	11.21	21	19.50	22	6 10	American	Sudden & Christenson (S. B.)	401.7	54.8	26.1	Portland	Leghorn	Wheat	7,351	6,928	5,103
O-15 [4]	19	17.50	21	13.47	21	19.55			American	United States Navy	184.0	18.0		Guayaquil	Cristobal				
O-11 [4]	21	17.15	22	6.11	22	14.00			American	United States Navy	184.0	18.0		Balboa	Cristobal				
O-13 [4]	21	21.12	22	6.17	22	13.50			American	United States Navy	184.0	18.0		Balboa	Cristobal				
Lehigh	21	18.20	22	7.43	22	14.46	22	14.46	American	N. A. & Western S. S. Co. (S. B.)	390.0	54.3	21.6	Seattle	Philadelphia	General	3,180	6,105	4,346
Mantaro	22	5.00	22	8.07	22	15.45			Peruvian	Peruvian Steamship Line	367.3	46.0	17.0	Callao	Cristobal	(11)	1,043	4,838	2,959
Point Adams	22	5.27	22	8.46	22	16.30	24	16.50	American	Pacific Mail Steamship Co.	289.0	44.1	19.4	San Francisco	Baltimore	(12)	2,969	2,899	2,678
O-16 [4]	19	17.12	22	12.25	22	18.10			American	United States Navy	184.0	18.0		Balboa	Cristobal				
Laura C. Hall	22	15.00	23	6.22	23	14.03	24	6.15	British	Pacific Metals Corporation	81.0	25.6	10.0	Buenaventura	Cristobal	Coffee	30	130	69
Steel Voyager	22	16.30	23	8.25	23	15.00	23	15.00	American	U. S. Steel Products Co.	395.5	55.0	23.0	Seattle	Baltimore	Lumber, general	6,215	7,285	5,255
San Joaquin	23	14.15	23	14.56	23	21.37	23	22.45	Norwegian	W. Wilhelmsen	425.4	57.1	20.0	Antofagasta	Tampico	Ballast		7,059	5,043
Mariechen [8]	23	14.45	24	6.39	24	17.00	24	17.00	Finnish	A. Mattsin	288.9	44.2	23.3	Tocopilla	Falmouth [10]	Nitrate	3,611	2,432	2,256
Elm Leaf	22	15.05	24	6.51	24	14.12	24	15.23	British	Anglo-Saxon Petroleum Co.	418.5	55.0		Balboa	Curacao	Ballast		4,299	3,407
Palena	24	1.30	24	7.35	24	15.05			Chilean	Chilean Steamship Line	350.0	42.1	20.6	Talcahuano	Cristobal	General	105	3,666	2,577
Sciota [9]	23	16.55	24	8.29	24	15.05			American	United States Navy	149.4	30.0		Balboa	Cristobal				
S. C. 287	19	18.30	24	8.30	24	14.58			American	United States Navy	110.0	16.0		Balboa	Cristobal				
Cauca	24	8.25	24	11.15	24	17.20			British	Pacific Steam Navigation Co.	246.0	35.2	13.7	Guayaquil	Cristobal	(13)	327	1,582	1,023
Mineola	25	5.00	25	7.35	25	14.10	25	20.45	American	W. R. Grace & Co.	298.6	40.0	12.6	Talara	New York	Ballast		2,835	1,822
Royalstar	25	7.40	25	9.43	25	16.38	25	21.00	British	Blue Star Line	450.0	58.5	23.6	Lyttleton	London	Frozen meat	4,397	8,561	5,815
Fionia	24	21.20	25	11.22	25	18.00	25	20.10	Danish	East Asiatic Co.	395.0	53.0	24.0	San Francisco	Copenhagen	General	3,923	5,744	4,016

[8] Sailer. [9] Tug. [10] For orders. [11] Copper, cotton, cocoa, and skins. [12] Coffee, beans, and general. [13] Cocoa, coffee, hides, and general.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date	Vessel.	Line.	For—
June 19	San Juan [9]	N. O.-Bluefields Fruit Transp. Co.	Bluefields.	June 19	Hellas	Bruusgaard Kiusterud Line	Kingston.
June 19	Metapan	United Fruit Co.	New Orleans.	June 19	Gen. W. C. Gorgas	Panama Railroad Steamship Line	New York and Haiti.
June 20	Nevisian	Leyland Line	Liverpool.	June 20	Metapan	United Fruit Co.	New Orleans and Bocas del Toro.
June 20	Ceres	Royal Netherlands W. I. Mail	High seas.	June 21	Nevisian	Leyland Line	New Orleans.
June 21	Toloa	United Fruit Co.	New York.	June 22	Cristobal	Panama Railroad Steamship Line	Norfolk.
June 21	Heredia	United Fruit Co.	New Orleans.	June 22	Cantigny	United States Army	New York.
June 21	Camden	United Fruit Co.	Tampico.	June 22	Heredia	United Fruit Co.	New Orleans and wayports.
June 22	San Gil	United Fruit Co.	Boston.	June 22	Toloa	United Fruit Co.	New York and wayports.
June 25	Camito	Elders & Fyffes, Ltd.	Port Limon.	June 23	San Gil	United Fruit Co.	Boston and Port Limon.
June 25	Caribbean	Panama Railroad Cattle Industry	Cartagena.	June 23	Ceres	Royal Netherlands W. I. Mail	Havre.
June 25	Colon	Panama Railroad Steamship Line	New York.	June 25	Camito	Elders & Fyffes, Ltd.	Kingston.

PORT OF BALBOA.

June 19	Denver	United States Navy	Puntarenas.	June 21	Hayo Maru	Toyo Kisen Kaisha	Valparaiso.
June 20	Hayo Maru	Toyo Kisen Kaisha	Hongkong.				

*Other than ships passing through the Canal.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending June 25, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged.	Cargo— Laded.
				Tons.	*Tons.*
Gen. W. C. Gorgas	Panama Railroad Steamship Line		June 19		3,550
Venezuela	Pacific Mail Steamship Co		June 19		97
Jason	Royal Netherlands W. I. Mail		June 20		261½
Quilpue	Pacific Steam Navigation Co	June 19	June 21	86	91¼
Jamaica	Pacific Steam Navigation Co		June 21		240¼
Manavi	Pacific Steam Navigation Co		June 21		103¼
Nevisian	Leyland Line	June 20	June 21	633	387
San Juan	Pacific Mail Steamship Co	June 21		1,575½	
Heredia	United Fruit Co	June 21	June 22	1,063	34½
Toloa	United Fruit Co	June 21	June 22	379	51½
Camden	United Fruit Co	June 21		9,022	
San Gil	United Fruit Co	June 22	June 23	17	38
Mantaro	Peruvian Steamship Line	June 22		1,020	
Point Adams	Pacific Mail Steamship Co	June 22	June 24	1,134	5
Laura C. Hall	Pacific Metals Corporation	June 23	June 24	30	33
Cauca	Pacific Steam Navigation Co	June 24		327	
Balboa	Johnson Steamship Line	June 24	June 25	6	(1)
Palena	Chilean Steamship Line	June 24		104½	
Gen. O. H. Ernst	Panama Railroad Steamship Line	June 24		1,976	
Colon	Panama Railroad Steamship Line	June 25		2,155	
Camito	Elders & Fyffes, Ltd	June 25	June 25	10	4
Caribbean	Panama Railroad Cattle Industry	June 25		505	

[1] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending June 25, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged.	Cargo— Laded.
				Tons.	*Tons.*
Hayo Maru	Toyo Kisen Kaisha	June 20	June 21	226	
San Juan	Pacific Mail Steamship Co	June 20	June 21	2	
Jamaica	Pacific Steam Navigation Co	June 21	June 21		26
Elmleaf	Anglo-Saxon Petroleum Co	June 22	June 24	7,183	
Laura C. Hall	Pacific Metals Corporation	June 22	June 23	6	
Cauca	Pacific Steam Navigation Co	June 24	June 24	70	
Laura C. Hall	Pacific Metals Corporation	June 24	June 25		67

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended June 25:

Steamship *Robin Adair*, repairs to air pumps; barge *No. 102*, install 5′ by 9′ steel plate patch on deck; steamship *Venezuela*, renew section of steam line to No. 3 starboard deck winch.

PREVIOUSLY REPORTED.

U. S. S. *Tacoma*, propeller shaft work; steamship *Eelbeck*, miscellaneous engineer's department repairs; U. S. submarines *R–26*, general repairs, including docking; *R–24*, miscellaneous repairs; welding armature cores on main motors to spiders, and stiffening motor frames and foundations; steamship *Iquitos*, repairs to cargo booms; tug *Gorgona*, miscellaneous engineer's and deck department repairs; launch *Taboga*, general overhaul; dredge *Cascadas*, general repairs.

The following vessels were at the Cristobal shops for repairs during the week ended June 27:

Steamships *Colon*, *General O. H. Ernst*, and *Cristobal*, miscellaneous repairs and painting to engine, deck, and steward departments; tug supply *No. 1*, install new piston rings on all cylinders and air compressor; clean and paint bottom; repair air cooling coils and repair cylinders; motor ship *Satoe*, clean and paint bottom; fit bulwarks, lower anchor; cables to be run out and overhauled; close forward engine room door; water-tight doors to be cut on port side, and starboard side abreast forward E. R. platform; close steward's and cook's door in saloon alleyway and cut new water-tight door to starboard side; water-tight rubber trunk to be fitted around rudderpost from ship's counter to deck; fit chart room as chief officer's cabin; all ports

in forecastle head to be blank flanged, crank shafts of 4 engines to be put in lathe and crank pins to be machined up to uniform size; main bearings to be examined and crank shafts and tunnel shafting to be put in line; governor gear to be overhauled, all sea valves to be ground in, crank-pin brasses to be remetaled and bored out to suit crank pins where necessary, etc.; steamships *San Juan*, fit new ferrules in main condenser and auxiliary condenser; overhaul air pump and pump links; furnish and install new set of foot valves; overhaul L. P. eccentrics and link motions; furnish and install new valve to heater; overhaul throttle; take leads off H. P. and L. P. pins; braze flange on copper pipe on L. P. cylinder; straighten bilge suction pipe, repair ice boxes; overhaul capstan; fit new connecting rod brasses, new valve stem, new pin in valve crosshead, etc.; *Camden*, port boiler to be calked to stop leaks; seam in combustion chamber to be welded; vacuum gauge to be overhauled and tested; L. P. and H. P. steam gauges to be tested, make 2 bearing scrapers 10 inches long and two 14 inches long; take 2 short links out of 2 anchor chain stoppers, etc.; *Point Adams*, blow down one boiler to reseat main and donkey checks and put in new checks; renew suction pipe from hot well to donkey feed pump; renew 4-inch nipple on suction manifold to donkey feed pump; install new piston rings and oil cups for large dynamo engine; oiling cup in circulating pump engine to be repaired, etc.; *Mantaro*, cut out and weld crack in corner of forward furnace; repair engine room telegraph; repair steam pipe and tee pieces on steam line to dynamo; overhaul 4 steam stop valves on same line; repair and test pressure gauge on main boiler; repair test pressure pipe on main boiler; clean stoke hole, tank tops, and bilges, etc.; U. S. submarines *R-21*, *S-15*, launch *Margarita*, and steamships *Caribbean* and *Schodack*, minor repairs.

Renewal of Safety Deposit Boxes.

Rental for the coming fiscal year on the safety deposit boxes in the basement of the Administration Building falls due on July 1, 1921. All present holders of boxes are requested to remit the amount of $1.50 to cover same to the Collector, The Panama Canal, Balboa Heights.

There are now on hand about 30 vacant boxes open for rental to Panama Canal and Panama Railroad employees. These will be assigned in the order in which requests for same are received.

Fourth of July Train Schedule.

PANAMA RAILROAD COMPANY,
OFFICE OF MASTER OF TRANSPORTATION,
BALBOA HEIGHTS, C. Z., June 29, 1921.

CIRCULAR NO. 1839:

All concerned—The Panama Railroad will operate Sunday schedule on the main line Monday, July 4, and in addition the following special train service:

BETWEEN PEDRO MIGUEL AND PANAMA.

Leave Pedro Miguel for Panama..... 8.30 a. m.
Leave Panama for Pedro Miguel..... 12.30 a. m., July 5
Regular stops to be made in both directions.

BETWEEN GATUN AND THIRD STREET, COLON.

Leave Gatun for Colon (Third Street)..... 7.45 a. m.
Leave Colon (Third Street) for Gatun..... 5.10 p. m.
Stops to be made at Fort Davis, Mount Hope, and Cristobal commissary, on both trips.

The special trains between Gatun and Colon, and between Pedro Miguel and Panama are for the exclusive use of American employees and their families and for soldiers and sailors in uniform, and no transportation will be collected on these trains.

W. J. BISSELL,
Acting Master of Transportation.

Approved:
S. W. HEALD,
Superintendent.

Independence Day Celebrations.

PACIFIC SIDE.

The program for the Fourth of July celebration at Balboa will consist of a track and field meet for children and adults, continuous vaudeville at the clubhouse, aquatics, tennis championship, rifle and pistol matches, exhibition by aero squadron and mounted batteries, baseball games, children's and patriotic exercises, display of fireworks and dances.

A free special train will leave Pedro Miguel at 8.30 a. m., July 4, and return from Balboa at 12.30 a. m., July 5.

On July 4 the Balboa-Ancon bus line will operate on the regular schedule, from 8 a. m. to 12 o'clock midnight.

The Pedro Miguel-Balboa bus line will operate on regular schedule, from 10 a. m. to 12 o'clock midnight, with a double schedule from 4 p. m. to 12 midnight.

ATLANTIC SIDE.

The celebration on the Atlantic side will be primarily for children. The program consists of patriotic exercises, band concert, athletic games, aquatic sports, and motion pictures, with free ice cream and other refreshments, and will be held on Pier 6 from 12.30 to 4 p. m. In addition, children will be entertained at Coco Solo from 8.35 to 10.35 a. m. A special train, free to children of Canal and railroad employees and soldiers and sailors in uniform, will leave Gatun at 7.45 a. m., arriving at Colon at 8.05 a. m., in time to connect with train for Coco Solo at 8.15 a. m.

For adults, two dances, one at 2.30 p. m., with music by the 14th Infantry Band, and the other at 8.30 p. m., with music by the Coco Solo Band, will be held on Pier 6.

Clerk Examination.

The local Civil Service Board announces open competitive examinations in the month of July, as follows: Clerk, Postal Clerk, and Clerk (with knowledge of stenography and typewriting). The examinations for clerk, and postal clerk will be held in the high school building, Balboa, C. Z., on July 9, while that for clerk (with knowledge of stenography and typewriting) will be held on July 16. The examinations begin at 9 a. m. Applications for these examinations should be completed and filed with the Secretary, Board of Civil Service Examiners, Balboa Heights, C. Z., a few days prior to the examination to be taken. These examinations are for The Panama Canal Service, and are open to men and women. The age limits are 18 and 45 years. The announcement number is 484-amended, and the application form is No. 1312. Any additional information may be secured from the local secretary, telephone 286, Balboa.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z. (telephone 286):

Animal husbandman (male and female); $1,800 to $3,000 a year; form 2118; announcement No. 325; age, 21 but not 45 years; vacancies in Bureau of Animal Industry, Department of Agriculture, Washington, D. C.; July 26, 1921.

Assistant dairy husbandman (male and female); $1,680 to $2,460 a year; form 1312; announcement No. 136-amended; age, below 45 years; vacancies in Dairy Division, Bureau of Animal Industry, Department of Agriculture; July 20, 1921.

Assistant in date scale eradication (male and female); $1,500 to $1,800 a year; form 1312; age, 20 but not 45 years; vacancies in Federal Horticultural Board, Department of Agriculture; August 3, 1921.

Coal inspector and sampler (male and female); $1,200 to $1,800 a year; age, 21 years but not 55 years; vacancies in Bureau of Mines, Department of the Interior, Washington, D. C.; August 3, 1921.

Computer (male and female); $1,400 to $2,000 a year; form 1312; announcement No. 323; age, below 70 years; vacancies in the Coast and Geodetic Survey, Washington, D. C., and Manila, P. I.; August 3–4, 1921.

Dairy manufacturing specialist (male and female); $2,500 to $3,500 a year; form 2118; announcement No. 322; age, below 50 years; vacancies in Dairy Division, Bureau of Animal Industry, Department of Agriculture, Washington, D. C.; July 26, 1921.[1]

Instrument maker (male and female); $6.88 a day and $900 to $1,800 a year; form 1312; announcement No. 134; age, 20 but not 65 years; vacancies in Coast and Geodetic Survey, Naval Observatory, Office of Secretary of Agriculture, Bureau of Standards, Department of Commerce, and Weather Bureau; October 1, 1921.[1]

Pharmacologist (male and female); $2,500 to $3,000 a year; form 2118; announcement No. 324; age, 25 but not 45 years; vacancies in Bureau of Internal Revenue, Treasury Department, Washington, D. C.; July 19, 1921.[1]

Radio operator (male and female); $1,380 a year; form 1312; announcement No. 320; age, 21 but not 40 years; vacancies in the Lighthouse Service, Ketchikan, Alaska; July 19, 1921.[1]

Specialist in land-grant college statistics (male); $1,800 a year; form 2118; announcement No. 554; age, below 50 years; vacancies in Bureau of Education, Department of the Interior, Washington, D. C.; July 26, 1921.[1]

Valuation aid, $1,200 to $2,500 a year; assistant valuation engineer, $2,500 to $3,600 a year; valuation engineer, $3,600 to $4,800 a year (male and female); form 1312; announcement No. 234-amended; age, 21 but not 55 years; vacancies in the technical staff of the Income-Tax Unit of Bureau of Internal Revenue, Treasury Department; September 1, 1921.[1]

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[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing on that date.

Official Circulars.

Acting Chief Clerk.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 22, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective this date, and while Mr. John H. Smith is Acting Executive Secretary, Mr. James F. Markey will be Acting Chief Clerk, *vice* Mr. C. M. Lupfer, who has entered on leave of absence.

JAY J. MORROW,
Governor.

Acting Roadmaster.

PANAMA RAILROAD COMPANY,
BALBOA HEIGHTS, C. Z., June 20, 1921.

All concerned—Effective this date, and during the absence of Mr. M. B. Connolly on leave, Mr. E. McTucker will be Acting Roadmaster of the Panama Railroad Company.

S. W. HEALD,
Superintendent.

Approved:
JAY J. MORROW,
President.

Sailing of the Steamship "Cristobal."

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 28, 1921.

All concerned—The steamship *Cristobal* is scheduled to leave Cristobal for Norfolk on or about July 12. All employees who have applications on file in this office for transportation to New York, who wish to be considered for passage to Norfolk, should advise this office in writing immediately, not later than July 5. So far as accommodations are available, reduced rates will be issued for this sailing according to the date of the applications now on file were received by the Executive Office.

Persons already assigned to the steamship *Colon*, sailing July 1, will not be reassigned to the steamship *Cristobal*.

This office should also be informed in writing hereafter by employees who wish to be considered for passage to Norfolk by later sailings if their present applications specify only New York.

JNO. H. SMITH,
Acting Executive Secretary.

Garbage Cans.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., June 20, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective June 1, 1921, the health officers at Colon and Panama will issue garbage cans to departments and divisions of The Panama Canal and Panama Railroad at each terminal for garbage purposes wherever required, and replace worn-out cans without charge.

The Health Department will be reimbursed for the purchase price of the cans by charging into the cost of collection an amount monthly to cover depreciation of the cans. This amount will be determined in this office on the basis of the number of cans in use, and an estimated life of 3 years for those used by departments and divisions of The Panama Canal and commissary department, and 1 year for those in use on the Panama Railroad docks at Balboa and Cristobal.

Please be guided accordingly in making future requisitions for garbage cans.

H. A. A. SMITH,
Auditor, The Panama Canal.

Empty Barrels and Packing Cases for Sale.

Address inquiries to Chief Quartermaster, The Panama Canal, Balboa Heights, C. Z.

Sale of Lumber.

The Panama Canal has on hand at Balboa storehouse considerable quantities of 1″ x 6″, 1″ x 8″, and 1″ x 10″ dressed lumber, Douglas fir, grade 1, select common. Further information will be furnished by General Storekeeper, Balboa, or at office of Chief Quartermaster, Balboa Heights.

Sale of Typewriters.

The Panama Canal has for sale a number of used Underwood typewriters at reasonable prices. Some of these machines are at Balboa storehouse and others at Cristobal storehouse, where they may be inspected and purchased direct.

Additions to Commissary Stock.

Grocery Section.

Chocolate, baking, Ideal, ½s cake	$0.10
Butter, peanut, P. C., 13-oz. jar	.32
(2 cents for return of jar.)	
Relish, Chili, 8-oz. bot	.06

Hardware Section.

Plates, baby, Doulton, ea	.91

Location of Patients, and Visiting Hours, at Ancon Hospital.

The following table shows the distribution of patients in the new Ancon hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Present number of beds.	Visiting hours.
Section "A"—White American, male:		Tuesdays, Thursdays, and Saturdays, 2 to 4.30 p. m. and 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11 a. m. and 2.30 to 4.30 p. m.
Ward No. 1, Medical, Eye and Ear	44	
Ward No. 2, Medical, Eye and Ear	41	
Ward No. 3, Surgical	44	
Ward No. 4, Surgical	41	
Cells (2)	2	
	172	
Section "B":		
White American, female	23	Daily except Sunday, 2 to 4.30 p.m.; 6.30 to 8 p. m.
White foreign, female	15	Sundays and holidays, 10 to 11 a. m.; 2 to 4.30 p. m. 6.30 to 8 p. m.
Nursery	16	No visitors permitted.
Private rooms (40)	46	Daily, 9.30 to 11 a. m.; 2 to 4.30 p. m.; 6.30 to 8 p. m.
Cells (2)	2	
	102	
Section "C":		
Ward No. 9, White foreign, male	39	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 10, Colored, eye and ear, convalescent medical	39	
Ward No. 11, Colored Acute surgical	39	
Ward No. 12, Colored Acute surgical	39	
Ward No. 13, Colored Convalescent surgical	39	
Ward No. 14, Colored Convalescent surgical	39	
Cells (6)	6	
Rooms (7)	7	
	247	
Section "D":		
Ward No. 15	41	
Ward No. 16	39	
Ward No. 17, Colored children	32	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 18, White children	30	Daily, 9.30 to 10 a. m.; 2 to 4 p. m.
Ward No. 19, Colored female medical	41	Wednesdays, Sundays, and holidays, 1.30 to 3 p. m.
Ward No. 20, Colored female surgical	34	
Rooms (6)	6	
Cells (6)	6	
	229	
Isolation:		No visitors permitted.
Floor No. 1	14	
Floor No. 2	29	
Floor No. 3	28	
Floor No. 4	28	
	99	
Total number of beds	849	

Emergency passes are issued only by and in the discretion of the section nurse.

COMMISSARY NOTES.

Change of Opening Hour, Cristobal Commissary.

As an accommodation to commissary customers, the retail store at Cristobal hereafter will be opened at 2 p. m. instead of 2.30 p. m. on sailing days of vessels of the Panama Railroad Steamship Line.

Dry Goods.

There has recently been received and distributed to the line stores a shipment of handkerchiefs, pillow tops, table covers, bedspreads, and dresser scarfs of attractive printed material. The prices are very reasonable.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.
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The Panama Canal Record, Balboa Heights, Canal Zone, or
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at Cristobal, C. Z., under the Act of March 3, 1879.

Volume XIV. Balboa Heights, C. Z., July 6, 1921. No. 47.

Canal Traffic in June.

Commercial traffic through the Canal in June was the lowest for any month during the past fiscal year in number of vessels, tonnage, amount of tolls collected and cargo tons.

A comparison with the traffic for the preceding month, and of the corresponding month of last year, shows the following:

	June, 1921.	May, 1921.	June, 1920.
Number of vessels through the Canal:			
Commercial	193	210	201
United States Government vessels	33	30	11
Launches (under 10 tons)	3	6	6
Total vessels and craft through Canal	229	246	218
Tolls collected:			
Commercial vessels	$751,964.12	$835,882.77	$711,159.19
United States Government vessels	Free	Free	Free
Launches, etc	3.00	31.80	108.99
Total tolls collected	751,967.12	835,914.57	711,268.18

Notwithstanding the decided falling off of traffic during the past two or three months, the past fiscal year has considerably exceeded any preceding year in volume of traffic through the Canal. Tonnage and cargo figures have not yet been compiled but revenue from tolls for the past year, by months, was as follows:

	Commercial vessels only.
July, 1920	$842,312.05
August, 1920	936,209.44
September, 1920	1,010,150.63
October, 1920	911,825.58
November, 1920	933,912.11
December, 1920	1,007,849.32
January, 1921	1,095,857.46
February, 1921	917,412.49
March, 1921	1,105,536.55
April, 1921	927,977.09
May, 1921	835,882.77
June, 1921	751,964.12
Total, fiscal year 1921	11,276,889.61
Total, fiscal year 1920	8,513,933.15
Total, fiscal year 1919	6,172,828.59

Notice to Mariners.—Obstruction to Navigation.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 29, 1921.

CIRCULAR No. 643-89:

The master of the U. S. S. *Tacoma* reports by radio having passed at 11.35 a. m., on June 29, while in latitude 7° 49′ north, longitude 79° 47′ west, a large log 30 feet long, dangerous to navigation.

JAY J. MORROW,
Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight July 2, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Wm. Nottingham [1]	25	4.30	26	6.25	26	14.08	26	22.00	Norwegian	A. S. Porsgrunds	216.0	42.0	11.0	Buenos Aires	Port Townsend	Ballast		1,274	1,120
Bolivar	26	7.09	26	8.20	26	15.10	27	20.04	Mexican	Mexican Navigation Co	261.0	39.0	17.0	Pensacola	Salina Cruz	Coal	1,785	1,876	1,190
Aden Maru	26	9.05	26	9.40	26	17.35	27	4.00	Japanese	Kokasui Kisen Kaisha	385.0	51.0	18.3	New York	Yokohama	General	1,000	5,914	4,400
Tancred	26	11.20	26	12.00	26	19.25	26	20.45	Norwegian	W. Wilhelmsen	334.0	48.0	15.0	Newport News	San Francisco	Ballast		3,899	2,853
San Juan	21	14.15	27	5.57	27	13.18	27	18.00	American	Pacific Mail Steamship Co	283.0	37.0	18.3	Cristobal	San Francisco	General	1,675	2,379	1,593
Gen. O. H. Ernst	24	7.15	27	6.05	27	12.57	27	14.05	American	Panama Railroad Steamship Line	356.0	45.0	21.0	New York	Guayaquil	General	1,063	4,503	2,764
Mantaro	22	15.15	27	6.17	27	14.35	27	22.34	Peruvian	Peruvian Steamship Line	360.0	45.0	18.8	Cristobal	Ilo	General	384	4,838	2,959
Kennecott [2]	26	21.14	27	6.45	27	15.14	27	16.30	American	Alaska Steamship Co	342.0	46.0	19.0	Baltimore	Los Angeles	General	3,100	4,582	3,371
Cape Henry	26	22.40	27	10.55	27	18.11	27	19.25	American	Atlantic Gulf & Pac. Co. (S. B.)	376.0	52.0	21.6	Baltimore	San Diego	General	3,106	5,146	3,557
Hatipara	28	6.30	28	8.23	28	16.37	29	22.35	British	British Steam Navigation Co	445.0	58.0	28.6	New Orleans	Auckland	Sulphur, general	8,261	8,341	6,010
Kinderdijk	28	6.00	28	9.23	28	17.03	28	18.10	Dutch	Holland-American Line	470.0	58.0	16.4	Rotterdam	San Francisco	General	506	8,515	6,068
Ottar	27	20.54	28	10.00	28	17.34	28	19.32	Norwegian	Jorgen C. Knudsen	262.0	37.0	12.6	New York	Guayaquil	General	14	1,815	1,222
Santa Luisa	28	17.31	29	6.15	29	13.06	29	17.08	American	W. R. Grace & Co	360.0	51.0	18.6	New York	Talcahuano	General	1,733	5,694	3,975
William Taylor [3]	28	7.22	29	6.25	29	14.37	29	20.10	American	Apex Navigation Co	209.0	42.0	21.1	Norfolk	Honolulu	Coal for Navy	1,915	1,421	1,218
Montgomery City	29	6.45	29	7.15	29	15.00	29	16.30	American	United States Steel Products Co	442.0	56.0	26.1	New Orleans	Yokohama	Steel and cotton	7,429	7,539	5,448
Palena	24	15.05	29	10.13	29	16.51	29	18.15	Chilean	South American Steamship Line	350.0	42.0	23.6	Cristobal	Valparaiso	General	399	3,666	2,577
Beaver [4]	23	10.51	30	6.50	30	13.23	5	13.15	American	United States Navy	380.0	47.0		Portsmouth	Pearl Harbor				
S-16 [5]	23	10.06	30	6.10	30	14.29	5	10.11	American	United States Navy	231.0	20.0		Portsmouth	Pearl Harbor				
S-17 [5]	23	11.02	30	6.26	30	14.33	5	10.11	American	United States Navy	231.0	20.0		Portsmouth	Pearl Harbor				
S-15 [5]	23	10.25	30	6.32	30	14.19	5	10.11	American	United States Navy	231.0	20.0		Portsmouth	Pearl Harbor				
S-14 [5]	23	11.00	30	6.36	30	14.24	5	10.11	American	United States Navy	231.0	20.0		Portsmouth	Pearl Harbor				
S-9 [5]	23	11.10	30	6.55	30	14.33	5	10.11	American	United States Navy	231.0	20.0		Portsmouth	Pearl Harbor				
Cauca	24	17.20	30	7.05	30	15.02	30	19.55	British	Pacific Steam Navigation Co	246.0	35.0	14.6	Cristobal	Guayaquil	General	312	1,582	1,023
Rio Grande	29	16.40	30	7.00	30	15.41	30	16.40	Norwegian	Det. Nordenfjelske S. S. Co	360.0	52.0	20.0	Hamburg	Talcahuano	General	1,256	5,137	3,767
Ohioan	29	18.30	30	7.49	30	15.57	30	16.49	American	American-Hawaiian Line	408.0	54.0	21.0	New York	San Francisco	General	2,310	7,106	5,066
Lorain	30	11.42	30	12.07	30	18.50			American	Green Star Line (S. B.)	396.0	55.0	26.6	Port Arthur	Yokohama	General and oil	7,735	7,288	5,226
Orcus	30	12.51	30	13.07	30	19.50	1	3.05	American	Wessel Duval & Co. (S. B.)	380.0	53.0	23.8	New York	Talcahuano	General and oil	3,950	5,667	4,220
West Isleta	1	9.26	1	9.45	1	16.12	1	17.15	American	N. A. & Western S. S. Co. (S.B.)	409.0	54.0	18.0	Philadelphia	Los Angeles	General	1,096	6,759	4,900
North American	1	10.45	1	11.30	1	17.40	2	2.35	American	North American Steamship Line	251.0	43.0	17.9	New York	Callao	General	2,094	2,444	1,571
Benjamin Brewster	1	12.12	1	12.30	1	19.58	3	15.34	American	Standard Oil Co	411.0	53.0	27.0	Tampico	Pisagua	Crude petroleum	7,350	6,360	4,337
Chile [2]	1	13.13	1	13.30	1	20.40	1	22.29	Danish	East Asiatic Co	425.0	55.0	15.0	Copenhagen	San Francisco	Ballast		7,382	5,663
Australien	1	11.05	2	6.08	2	12.49	2	14.00	Danish	Danish East Asiatic Co	398.0	54.0	20.3	Copenhagen	San Francisco	General	4,090	7,027	5,338
Speaker	1	17.25	2	6.20	2	13.17	3	13.50	British	T. and J. Harrison	370.0	50.0	16.6	London	San Francisco	Ballast			

[1] Sailing ship. [2] Motor ship. [3] Schooner. [4] Subtender. [5] Submarine.

Celebes Maru	1	16.04	2	6.37	2	15.15	2	16.39	Japanese	Osaka Shosen Kaisha	385.0	51.0	23.6	New Orleans	Calcutta	Cotton, general	3,877	6,014	4,406
Koyo Maru	2	5.45	2	7.04	2	15.22	3	7.30	Japanese	Toyo Kisen Kaisha	400.0	53.0	22.0	New York	Yokohama	General	4,787	6,233	4,398
Orowaiti	2	8.40	2	9.15	2	16.11	2	19.19	British	Union Steamship Co	405.0	53.0	28.1	Port Lobos	San Francisco	Oil	8,000		
Acajutla	28	16.00	2	9.55	2	16.44	2	17.45	British	Pacific Steam Navigation Co	215.0	33.0	14.6	Cristobal	Champerico	General		1,273	706

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Benalder	26	5.30	26	8.40	26	16.01	26	18.50	British	Ben Line, Ltd.	400.0	51.8	25.6	Portland	Dublin	Wheat	7,248	5,419	3,990
Alkmaar	26	13.15	26	14.45	26	21.48	27	1.45	Dutch	Royal Netherlands W. I. Mail	440.2	62.5	30.0	Portland	Falmouth	Wheat	10,090	9,505	6,807
Balboa	26	14.40	27	6.30	27	13.17			American	Colombian Maritime Co	190.0	29.1	11.2	Buenaventura	Cristobal	Coffee	359	741	350
Ionic	27	2.45	27	8.27	27	15.08	28	7.00	British	White Star Line	500.3	63.3	24.0	Auckland	London	General	4,000	12,872	9,577
Matatua	27	15.45	28	6.31	28	13.26	28	13.57	British	Shaw, Saville & Albion Co	448.0	56.5	22.6	Lyttleton	London	(10)	3,322	8,229	5,693
Acajutla	28	9.00	28	9.40	28	16.00	2	9.55	British	Pacific Steam Navigation Co	215.7	33.5	16.0	Champerico	Cristobal	General	729	1,273	706
Canada	28	5.00	28	12.21	28	19.37	29	17.52	Swedish	Johnson Line	440.0	56.0	27.0	Tacoma	Gothenburg	General	7,931	7,476	5,456
West Catanace	28	11.45	28	12.32	28	20.42	29	12.30	American	Wilder Steel Steamship Co	410.5	54.1	24.0	Puget Sound	New York	Lumber	4,740	6,567	4,917
Gen. H. F. Hodges	29	5.00	29	9.29	29	16.20	2	13.58	American	Panama Railroad Steamship Line	323.5	39.0	18.0	Guayaquil	New York	General	1,521	3,013	1,574
Borgland	28	4.00	30	6.32	30	14.40	30	14.40	Norwegian	Peter Olsen	362.0	51.5	25.0	Salvador	Bergen	(11)	6,017	5,274	3,886
Cutty Sark [6]	29	13.36	30	6.33	30	13.24	1	13.54	British	Maj. Henry Keswick	263.0	25.6	9.0	Yokohama	United King			897	320
Guardian [7]	29	15.00	30	6.36	30	15.05	3	6.15	American	All-America Cables Co	278.4	36.0	18.6	Callao	Cristobal			897	320
William H. Webb	30	0.10	30	7.30	30	16.36	30	22.50	American	Barber Line (S. B.)	400.7	54.2	24.0	Manila	New York	General	6,403	6,528	4,735
Santa Malta	30	3.50	30	7.54	30	16.33	30	17.45	American	Atlantic & Pacific Steamship Co.	404.6	53.9	28.0	Antofagasta	Charleston	Nitrate of soda	8,206	6,766	4,809
Harold Dollar	30	9.33	30	10.11	30	17.17	30	18.47	British	Canadian Dollar Line	376.5	52.2	23.0	Shanghai	New York	(12)	5,807	5,224	3,934
Newport	30	14.20	1	6.38	1	14.30			American	Pacific Mail Steamship Co	326.0	38.2	18.0	San Francisco	Cristobal	General	1,370	3,173	2,163
Estrella de Coto [8]	1	6.00	1	6.48	1	16.10	1	16.10	Panaman	Panaman Government				Panama	Colon				
Republica [8]	1	6.00	1	6.48	1	16.10	1	16.10	Panaman	Panaman Government				Panama	Colon				
Ceylon	30	21.00	1	7.48	1	16.30	1	18.22	Swedish	East Asiatic Co	417.2	54.9	24.0	Portland	Queenstown	General	7,820	5,514	3,938
Gen. W. H. Graham [9]	24	14.20	1	9.43	1	16.00			American	United States Government	156.0	32.0		Balboa	Cristobal				
Eastern Prince	1	3.00	1	13.34	1	21.07	1	22.40	British	Prince Line, Ltd	469.4	58.5	26.3	Portland	London	Wheat, flour	9,241	8,413	5,971
Noorderdyk	1	18.45	2	7.45	2	15.05	2	17.17	Dutch	Holland-American Line	470.0	58.0	28.0	Vancouver	Rotterdam	General	10,600	8,818	6,611
Acme	2	1.30	2	8.08	2	16.30	3	16.10	American	Standard Transportation Co	435.0	56.0	22.0	Manila	New York	Coconut oil	6,010	7,405	5,166
Guatemala	29	4.45	2	12.53	2	20.00			British	Pacific Steam Navigation Co	359.3	43.3	16.6	Valparaiso	Cristobal	General	533	4,210	2,744

[6] Yacht. [7] Cable ship. [8] Launch. [9] Mine planter. [10] Cold storage and wool. [11] Barley, coffee, flour, etc. [12] Sugar, hemp, and copra.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
June 26	Atenas	United Fruit Co.	New Orleans.	June 26	Atenas	United Fruit Co.	Bocas del Toro.
June 26	Frednes	Jorgen C. Knudsen	Puerto Colombia.	June 28	Red Wing [13]	United States Army	United States ports.
June 26	Haiti	French Line	Saint Nazaire.	June 28	Stuyvesant	Royal Netherlands W. I. Mail	Port Limon.
June 26	Red Wing [13]	United States Army	Norfolk.	June 28	Frednes	Jorgen C. Knudsen	Kingston.
June 27	Cartago	United Fruit Co	New Orleans.	June 29	Caribbean	Panama Railroad Cattle Industry	Cartagena.

[13] U. S. Tug.

(Continued on page 744, column 2.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending July 2, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged.	Cargo— Laded.
				Tons.	*Tons.*
San Juan	Pacific Mail Steamship Co		June 27		1,630
Mantaro	Peruvian Line		June 27		423
Gen. O. H. Ernst	Panama Railroad Steamship Line		June 27		1,068
Frednes	Caribbean Steamship Line	June 26	June 28	500	283
Haiti	French Line	June 26	June 29	16	320
Ottar	Caribbean Steamship Line	June 27	June 28	3	13
Cauca	Pacific Steam Navigation Co		June 29		385½
Palena	Chilean Steamship Line		June 29		398
Caribbean	Panama Railroad Cattle Industry		June 29		530¼
Cartago	United Fruit Co	June 27	June 30	926	29
Balboa	Caribbean Steamship Line	June 27		359	
Kinderdijk	Holland-American Line	June 28	June 28	7	(2)
Stuyvesant	Royal Netherlands W. I. Mail	June 28	June 28	31	(2)
Catamares	United Fruit Co	June 28	June 29	358	130
Navigator	Harrison Line	June 28	June 29	175	54
Canada	Johnson Line	June 28	June 29	(1)	413
Acajutla	Pacific Steam Navigation Co	June 28	July 2	729	562
Atenas	United Fruit Co	June 29	June 29	2½	9
Gen. H. F. Hodges	Panama Railroad Steamship Line	June 29	July 2	373	710
Tivives	United Fruit Co	June 29	June 30	39	937
Stuyvesant	Royal Netherlands W. I. Mail	June 30	July 2	½	1,903
Newport	Pacific Mail Steamship Co	July 1		1,309	
Colon	Panama Railroad Steamship Line		July 1		2,499
Australien	Danish East Asiatic Co	July 1	July 2	224	(2)
La Navarre	French Line	July 1		84	
San Pablo	United Fruit Co	July 2	July 2	4	(2)
Guatemala	Pacific Steam Navigation Co	July 2		533	

[1] No cargo discharged. [2] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending July 2, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged.	Cargo— Laded.
				Tons.	*Tons.*
Derblay	United States Shipping Board	June 26	June 26	416	
San Juan	Pacific Mail Steamship Co	June 27	June 27		12
Borgland	Peter Olsen	June 28	June 28	100	
Guatemala	Pacific Steam Navigation Co	June 29	July 2	29	
Cauca	Pacific Steam Navigation Co	June 30	June 30		39
Newport	Pacific Mail Steamship Co	June 30	June 30	82	8
Edgemoor	U. S. Army Transport Service	July 1		838	

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended July 2:

Tug Coco Solo, install engine foundation and shaft log; install engine, shaft, and propeller; manufacture and install sea connection for circulating water suction and hull fittings for overboard discharge from circulating water system and bilge pump; connect bilge pump suction to present bilge system; install fuel lines from tanks to engine; install exhaust pipe with casing and spark arrester; install stack guys; steamship *Maricopa*, lift rudder and repair; rerivet deck under dynamo; rerivet stanchion and bracket plates where loose; repair starboard chain pipe; renew rivets in hull structures; renew 2 smokestack guys; straighten brake handle and clutch screw on anchor windlass; repair copper pipe and grind in steam valves; repair heater coils in cargo tanks; manufacture and install new pump rod on main cargo pump; renew valve chest cover and seat and face off valve on one auxiliary cargo pump; perform miscellaneous deck work as required; grind in throttle and open up H. P. valve for inspection; open up main condenser and make repairs as necessary; clean boilers and uptakes, tram furnaces, weld combustion chambers and roll tubes if necessary; grind in and repack boiler mountings and manufacture spare parts; overhaul general service pump; repair Weir feed pumps; renew bushing for blower engine piston rod; grind in steam valve and repair one oil cup on generator; braze

blow-off pipe to evaporator and manufacture 2 spare evaporator coils; weld or patch valve chest on fire pump; renew snifting valve on main injection to circulator and perform miscellaneous pipe work; supply boat *No. 2*, dock, stage, and clean, and paint bottom; renew zincs; grind in all sea valves and renew studs on strainer box; reface seats of intake and exhaust valves, both main and auxiliary engines; steamship *Guatemala*, dock, stage, clean, and paint; open up, clean, face, grind in and repack port and starboard main injection valves; unship port propeller, draw tail shaft and rewood lower half of stern bearing; fair and dress bent blades and assemble; turn gudgeon fit on all pintles and install bronze sleeves on pintles; renew all zinc plates around sternpost; motor ship *Borgland*, fair shell plates in place, starboard side, frames 18–19; steamships *Lorain*, repairs to refrigerating machine; *Paita*, renew bilge cover boards; renew rudder bearing blocks; clean and repair sounding pipe to No. 2 tank; open up condenser; test and repack tubes where necessary; repair locking device, wildcat frictions driving gear and pinions on anchor windlass; launch *Petrolia*, remove carbon from engine, reface, refit, and grind in all inlet and exhaust valves; renew one corroded piece of 2½-inch exhaust pipe.

PREVIOUSLY REPORTED.

Dredge *Cascadas*, general repairs; launch *Taboga*, general overhaul; U. S. submarines *R–24*, miscellaneous repairs; welding armature cores on main motors to spiders, and stiffening motor frames and foundations; *R–26*, general repairs, including docking.

A record for fast handling of ships out of and into the 1,000-foot dry dock at Balboa was made Wednesday, June 29, when the 15-yard dipper dredge *Cascadas* and the tank steamship *Maricopa* were undocked and supply boat *No. 2* and the Pacific Steam Navigation Company's steamship *Guatemala* were docked.

The flooding valves to the dry dock were opened at 7 a. m., preliminary to undocking, and the gates were closed preparatory to pumping at 8.40 a. m.

The combination of circumstances which enabled the work to be done in 100 minutes could not have been improved in any way, as a Dredging Division tug made fast to the dredge *Cascadas* as she came over the dry-dock sills and immediately handled her out of the slip and around to dock 14. The steamship *Maricopa* followed the dredge *Cascadas* out of the dock at once and was handled alongside dock 8 by the dock capstans. In the meantime, the steamship *Guatemala* under power, but assisted by a tug, was swinging into the slip. It was unnecessary to stop her, as supply boat *No. 2* entered the dock under her own power as soon as the *Maricopa* cleared the gates.

The following vessels were at the Cristobal shops for repairs during the week ended July 4:

Steamships *General H. F. Hodges* and *Colon*, miscellaneous repairs and painting to engine, deck, and steward departments; supply boat *No. 1*, install new piston rings on all cylinders and air compressor; clean and paint bottom; repair air-cooling coils and repair cylinder; motor ship *Satoe*, clean and paint bottom; fit bulkwarks, lower anchor and cables to be run out and overhauled; close forward engine room door; water-tight doors to be cut on port side, and starboard side abreast forward E. R. platform; close steward's and cook's door in saloon alleyway and cut new water-tight door to starboard side; water-tight rubber trunk to be fitted around rudderpost from ship's counter to deck; fit chart room as chief officer's cabin, all ports in forecastle head to be blank flanged; crank shafts of 4 engines to be put in lathe and crank pins to be machined up to uniform size; main bearings to be examined and crank shafts and tunnel shafting to be put in line; governor gear to be overhauled, all sea valves to be ground in, crank-pin brasses to be remetaled and bored out to suit crank pins where necessary, etc.; steamship *Cartago*, rebabbit fan engine brasses; weld crank; solder copper kettles, etc.; barge *No. 117*, dock and undock; scale and paint; repair "A" frames, strongbacks, sheathing, fenders, hopper coamings; overhaul winding gear, renew bitts, etc.; steamships *Vera Cruz*, work on main engines; repair gear, refit all

crank and crosshead bearings on main engine; refit eccentric straps, repair air pump, repair bilge suction, repair steam pipe and feed check on boiler; manufacture fire tools; *Manavi*, manufacture 1 manifold as per sketch; U. S. S. *Forse*, dock and undock, clean and paint; reenforce smoke pipe; manufacture new bridge wall backs, double and single grate bars and bearer bars; dismantle main engines, refit all brasses; repairs to feed pump safety valves, auxiliary pump, etc.; steamship *Cauca*, make new set of intermediate piston rings 29 5/16 inches by ¾ inch by ¾ inch; barges *No. 116*, scale and paint, renew sheathing; repair coaming, etc.; *No. 19*, scale and paint; miscellaneous repairs; renew deck plates, shell plates, and fenders; tug *San Juan*, overhaul dynamo; renew lignum-vitæ bearing, clean and paint bottom; line up engine, etc.; U. S. submarine *R-25*, overhaul anchor gear; renew defective rivets in engine foundations; install compressor; furnish and install fresh water suction with angle globe valve fitted with nose connection from forward fresh water tank; renew rubber gaskets in torpedo hatch, upper and lower hatches in coning tower; install toilet in superstructure; install automatic fuel compensation system; install seat in radio room; install chain type air compressor drive gear; remove defective rivets in engine foundation and renew; test oil tanks under same and renew defective rivets; install stowage for gun telescopes; manufacture and install reach rod to lift torpedo tube tripping latches; steamships *Agron*, *Newport*, *La Navarre*, *Haiti*, *Caribbean*, *Stuyvesant*, and launch *Margarita*, minor repairs.

Balboa-Pedro Miguel Bus Service.

The following schedule will be maintained until further notice:

Leave Balboa clubhouse at 4.15, 6, 7.30, 9, and 10.30 p. m.
Leave Pedro Miguel clubhouse at 5, 6.45, 8.15, 9.45, and 11.15 p. m.
Fare, 25 cents.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z. (telephone 286):

Apprentice plate cleaner; apprentice transferrer; apprentice picture engraver; apprentice letter engraver; $600 to $939 a year (male and female); form 304; announcement No. 326; age, 16 but not 18 years; vacancies in the Bureau of Engraving and Printing, Washington, D. C.; July 20, August 17, and September 21, 1921.

Assistant photographer (wet plate); $1,200 a year (male and female); form 1312; announcement No. 336; age, 18 but not 70 years; vacancies in the Engineer Reproduction Plant, Washington Barracks; Washington, D. C.; August 3, 1921.

Electrolytic plate finisher; $6.40 per diem (male and female); form 1800; announcement No. 330; age, 20 but not 50 years; vacancies in the Bureau of Engraving and Printing, Washington, D. C.; July 26, 1921.[1]

Lithographic transferrer; $1,200 a year (male and female); form 1800; announcement No. 331; age, 20 but not 50 years; vacancies in the Weather Bureau, Department of Agriculture, Washington, D. C.; July 26, 1921.[1]

Preparator, anthropological laboratory; $75 a month (male and female); form 304; announcement No. 332; age, 18 but not 55 years; vacancies in the National Museum, Washington, D. C.; August 3, 1921.

Tinner; $1,100 a year (male and female); form 1800; announcement No. 327; age, 20 but not 50 years; vacancies in the office of the Secretary of Agriculture, Washington, D. C.; August 2, 1921.[1]

[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing on that date.

Official Circulars.

Assignment of Family Quarters.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 30, 1921.

CIRCULAR No. 627-30:

1. Paragraphs 6 and 10 of Circular No. 627-24 are amended to read as follows:

"6. All applications for regular assignment of employees working within a district will take precedence over applications of any employees working elsewhere regardless of grade."

"10. Applications for family quarters will be classified and considered in the following order:

"(1) *Applications for regular assignment*—These will comprise applications from employees with families (wife and children constituting family), and widow or widower employees with dependent children (widow or widower by death or legal separation constituting this class).

"(2) *Applications for provisional assignment*—These will comprise applications from the following in the order named:

(*a*) Employees with dependent relatives only.
(*b*) Aliens on the gold roll.

"Provisional assignments will be made only after all applications for regular assignment of employees within and without a district have been

considered. Provisional assignments will be made for a period of 6 months and may be renewed for the same period upon approval of the Chief Quartermaster."

2. Paragraph 11 of Circular No. 627-24, as amended by Circular No. 627-28, is further amended by changing the first sentence thereof to read as follows:

"Applications for transfer must be submitted in the same manner as new applications and will be considered in the same order, except that transfers will not be allowed employees occupying quarters under provisional assignment."

JAY J. MORROW,
Governor.

Act of Congress.—Landing and Operation of Submarine Cables in the United States.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 22, 1921.

CIRCULAR NO. 600-80.

The Act of Congress quoted below is published for the information of all concerned.

JAY J. MORROW,
Governor.

AN ACT relating to the landing and operation of submarine cables in the United States.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That no person shall land or operate in the United States any submarine cable directly or indirectly connecting the United States with any foreign country, or connecting one portion of the United States with any other portion thereof, unless a written license to land or operate such cable has been issued by the President of the United States: *Provided,* That any such cable now laid within the United States without a license granted by the President may continue to operate without such license for a period of 90 days from the date this Act takes effect: *And provided further,* That the conditions of this Act shall not apply to cables, all of which, including both terminals, lie wholly within the Continental United States.

SEC. 2. That the President may withhold or revoke such license when he shall be satisfied after due notice and hearing that such action will assist in securing rights for the landing or operation of cables in foreign countries, or in maintaining the rights or interests of the United States or of its citizens in foreign countries, or will promote the security of the United States, or may grant such license upon such terms as shall be necessary to assure just and reasonable rates and service in the operation and use of cables so licensed: *Provided,* That the license shall not contain terms or conditions granting to the licensee exclusive rights of landing or of operation in the United States: *And provided further,* That nothing herein contained shall be construed to limit the power and jurisdiction heretofore granted the Interstate Commerce Commission with respect to the transmission of messages.

SEC. 3. That the President is empowered to prevent the landing of any cable about to be landed in violation of this Act. When any such cable is about to be or is landed or is being operated, without a license, any district court of the United States exercising jurisdiction in the district in which such cable is about to be or is landed, or any district court of the United States having jurisdiction of the parties, shall have jurisdiction, at the suit of the United States, to enjoin the landing or operation of such cable or to compel, by injunction, the removal thereof.

SEC. 4. That whoever knowingly commits, instigates, or assists in any act forbidden by section 1 of this Act shall be guilty of a misdemeanor and shall be fined not more than $5,000 or imprisoned for not more than one year, or both.

SEC. 5. That the term "United States" as used in this Act includes the Canal Zone, the Philippine Islands, and all territory, continental or insular, subject to the jurisdiction of the United States of America.

SEC. 6. That no right shall accrue to any Government, person, or corporation under the terms of this Act that may not be rescinded, changed, modified, or amended by the Congress.

Approved, May 27, 1921.

Coal.

THE PANAMA CANAL,
PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 1, 1921.

To all concerned—The following rates for coal will go in effect July 10, 1921:

	Cristobal-Colon.	Balboa.
1. For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 2.....	$15.00	$17.00
2. For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting transit.....		15.00
3. For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.....	16.00	18.00
4. For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 3, per ton of 2,240 pounds.....	17.00	19.00
5. When request is made by commander of vessel, chief engineer, or agent, for trimming on deck, between decks, or special trimming in bunkers for convenience of vessel, an additional charge of 90 cents per ton will be made for extra handling.		
6. For lump coal for galley use, delivered in sacks, additional charge per ton, $10. Should the vessel furnish satisfactory sacks, the price will be only $3 per ton additional. Not more than 5 tons will be supplied to a vessel.		
7. For coal for cargo, delivered only by special authority of the Governor, per ton of 2,240 pounds.....	15.00	17.00

JAY J. MORROW,
Governor, The Panama Canal.
President, Panama Railroad Co.

(NOTE—The above rates will be included in Tariff No. 5.)

Coal.

THE PANAMA CANAL,
PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 1, 1921.

To all concerned—The following rates for coal will go into effect July 10, 1921:

	Per ton of 2,240 pounds.		
	Cristobal and Colon.	Balboa.	Panama and line points.
1. To Panama Canal and to Panama Railroad at coaling plants, without trimming	$14.00	$15.50	.....
2. To parties taking carload lots, including U. S. Army and Navy, but exclusive of coal belonging to Navy	16.00	17.50	$17.50
3. Coal belonging to the U. S. Navy will be delivered at the plant at which stored for	3.00	3.00	.....
4. To parties taking less than carload lots from plants, cars, or bins	17.00	18.50	18.50
5. To employees of The Panama Canal, Panama Railroad, United States Government, and those entitled to employees' rates, including Santo Tomas Hospital	16.00	17.50	17.50

JAY J. MORROW,
Governor, The Panama Canal.
President, Panama Railroad Co.

(NOTE—These rates will be included in Departmental Tariff B, which is being printed and will be distributed in a few days.)

Rates of Pay—Silver Roll.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 1, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

The Governor has approved the following, effective July 1, 1921:

RATES OF PAY.

Effective July 1, 1921, and to continue until September 30, 1921, inclusive, all hourly rates of pay which were increased on July 1, 1920, by 2 cents will be decreased by 1 cent; similarly, monthly rates will be decreased by $2.50. The following rates are not included in this authorization:

(1) All task rates.
(2) All monthly rates of $80.

QUARTERS.

All silver employees regularly working at line locations from Gatun to Miraflores, inclusive, will, as nearly as possible, be expected to live at their stations. All silver employees now working and others taken on at these points will, within 5 days after being hired, be required to file application for Panama Canal quarters. When quarters are assigned, they should be occupied within 10 days or the employee will be discharged.

In making reductions of force on the silver roll, after citizenship has been considered, efficiency being equal, silver employees occupying Panama Canal quarters will be discharged last.

JOHN H. SMITH,
Acting Executive Secretary.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 739.

PORT OF CRISTOBAL—continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
June 28	Calamares	United Fruit Co.	New York.
June 28	Stuyvesant	Royal Netherlands W. I. Mail	Amsterdam.
June 28	Navigator	Harrison Line	Liverpool.
June 29	Atenas	United Fruit Co.	Bocas del Toro.
June 29	Tivives	United Fruit Co.	New York.
June 30	Stuyvesant	Royal Netherlands W. I. Mail	Port Limon.
July 1	La Navarre	French Line	La Havre.
July 2	San Pablo	United Fruit Co.	Port Limon.

*DEPARTURES.

Date.	Vessel.	Line.	For—
June 29	Atenas	United Fruit Co.	New Orleans.
June 29	Calamares	United Fruit Co.	New York and wayports.
June 29	Camden	United Fruit Co.	Tampico.
June 29	Haiti	French Line	Puerto Colombia.
June 29	Navigator	Harrison Line	United States ports.
June 29	San Juan [14]	N. O. and Bluefields Fruit Co.	Bluefields.
June 30	Tivives	United Fruit Co.	New York and wayports.
June 30	Cartago	United Fruit Co.	New Orleans and wayports.
July 1	Colon	Panama Railroad Steamship Line	New York and Haiti.
July 2	San Pablo	United Fruit Co.	Boston.
July 2	Stuyvesant	Royal Netherlands W. I. Mail	Puerto Colombia.

[14] Tug.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—
June 25	Derblay	General Steamship Corp. (S. B.)	Antofagasta.

Date.	Vessel.	Line.	For—
June 27	Derblay	General Steamship Corp. (S. B.)	Tacoma.

*Other than ships passing through the Canal.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Volume XIV. Balboa Heights, C. Z., July 13, 1921. No. 48.

Visit of General Mangin.

The cruiser *Jules Michelet*, carrying the French Mission to the Centenary of Peruvian Independence headed by General Mangin, arrived at Cristobal on the morning of July 12, and passed through the Canal on July 13. The French Mission will remain on the Isthmus until July 16. A program of entertainments in its honor has been arranged in the Republic of Panama and in the Canal Zone.

Canal Traffic in June.

The June traffic was distributed over trade routes as shown in the following tabulation:

ATLANTIC TO PACIFIC.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
United States coastwise:							*Long tons.*
United States	17	78,135	96,199	117,715	76,963	$94,577.11	68,809
From United States to Far East:							
United States	7	31,871	41,397	50,531	31,673	39,838.65	44,911
Japanese	5	20,162	22,872	29,643	19,508	24,866.30	23,088
British	3	12,074	14,505	17,138	10,924	15,092.50	20,568
Totals	15	64,107	78,774	97,312	62,105	79,797.45	88,567
From Cristobal to West Coast of South America:							
British	6	3,774	5,714	7,384	4,297	4,680.93	1,026
Chilean	3	5,071	8,827	10,165	6,160	6,338.75	1,320
Peruvian	3	3,708	7,750	12,325	6,031	4,635.00	1,472
United States	3	3,209	3,638	5,647	3,398	2,621.58	.....
Totals	15	15,762	25,929	35,521	19,886	18,276.26	3,818
From Europe to West Coast of South America:							
Norwegian	2	5,606	7,123	6,940	4,179	6,823.45	4,579
French	1	4,368	4,369	5,248	3,329	5,242.80	385
Danish	1	4,228	5,303	6,636	4,222	5,285.00	3,500
Swedish	1	3,430	5,533	5,554	4,225	4,287.50	2,901
British	1	2,930	4,494	4,645	2,948	3,662.50	2,838
Italian	1	2,718	3,773	4,680	2,850	3,397.50	736
Dutch	1	1,598	3,083	2,652	1,619	1,997.50	1,046
Totals	8	24,878	33,678	36,355	23,372	30,696.25	15,985
From East Coast of United States to West Coast of South America:							
United States	8	22,410	27,191	34,626	21,140	26,762.50	24,649
British	1	1,778	3,023	3,732	1,949	2,222.50	882
Norwegian	1	969	1,222	1,585	972	1,211.25	14
Totals	10	25,157	31,436	39,943	24,061	30,196.25	25,545
From East Coast of United States to Australasia:							
British	4	25,069	26,969	35,012	23,275	30,936.75	26,127
United States	1	3,503	4,915	5,630	3,495	4,378.75	7,411
Totals	5	28,572	31,884	40,642	26,770	35,315.50	33,538
From Europe to West Coast of United States:							
Dutch	2	9,723	12,134	15,306	9,595	12,153.75	2,766
Norwegian	1	4,523	5,627	7,093	4,479	5,653.75	6,006
United States	1	3,537	4,901	5,657	3,537	4,421.25	2,923
Danish	1	2,816	3,476	4,395	2,795	3,520.00	3,850
Totals	5	20,599	26,138	32,451	20,406	25,748.75	15,545

ATLANTIC TO PACIFIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From East Coast of Mexico to West Coast of South America:							*Long tons.*
British	1	4,645	5,311	7,270	4,513	$5,806 25	9,600
Norwegian	1	4,434	5,095	7,020	4,420	5,542.50	9,250
United States	1	3,770	4,298	6,330	3,863	4,712.50	8,862
Totals	3	12,849	14,704	20,620	12,796	16,061.25	27,712
From Europe to Australasia:							
British	2	11,556	14,414	18,455	11,777	14,445.00	4,418
From East Coast of Mexico to West Coast of United States:							
United States	2	9,875	12,192	15,849	9,702	12,343.75	20,000
Canadian coastwise:							
British	2	6,944	7,040	9,292	6,727	8,333.55	9,536
From East Coast of United States to West Coast of Canada:							
British	2	3,271	3,655	5,521	3,332	4,088.75	6,800
From East Coast of United States to West Coast of Central America:							
United States	2	1,964	2,165	2,765	1,964	2,455.00	2,470
From East Coast of United States to West Coast of Mexico:							
Mexican	2	1,964	2,394	3,325	1,894	2,455.00	3,785
From East Coast of South America to West Coast of United States:							
Norwegian	1	1,083	1,120	1,204	1,062	812.25	.....
United States	1	801	916	1,136	774	1,001.25	318
Totals	2	1,884	2,036	2,340	1,836	1,813.50	318
From Cristobal to West Coast of Central America:							
British	2	1,288	1,398	2,298	1,304	1,610.00	1,150
From East Coast of Mexico to West Coast of Canada:							
United States	1	8,408	8,409	10,290	7,890	10,090.80	12,857
From Europe to West Coast of Canada:							
United States	1	3,472	4,899	5,564	3,472	4,340.00	2,398
From East Coast of South America to Far East:							
Japanese	1	3,645	4,289	5,790	3,564	4,556.25	2,380
From East Coast of United States to Balboa, C. Z.:							
British	1	3,407	4,299	5,948	3,714	4,258.75	7,183
Foreign ship in ballast between American coastwise ports:							
Norwegian	1	2,815	2,853	3,475	2,232	2,111.25	.....
Mexican coastwise:							
French	1	2,155	2,096	2,953	1,880	2,515.20	2,571
From West Indies (Cuba) to West Coast of United States:							
United States	1	1,862	2,206	3,169	1,862	2,327.50	1,900
From Cristobal, C. Z., to West Coast of United States:							
United States	1	1,332	1,593	2,153	1,309	1,665.00	1,675
Colombian coastwise:							
British	1	614	622	1,138	602	751.20	624
Grand totals	103	336,515	415,302	520,884	331,420	410,829.32	359,584
May, 1921	100	334,894	414,429	529,408	334,322	412,934.09	381,323
June, 1920	102	300,045	358,387	464,877	294,261	370,188.37	424,750

PACIFIC TO ATLANTIC.

From West Coast of South America to East Coast of United States:							*Long tons.*
United States	9	23,016	28,809	37,844	23,215	$26,673.01	33,627
British	3	11,055	13,512	17,497	10,213	13,651.65	10,954
Japanese	1	3,368	4,598	5,446	3,311	4,210.00	3,500
Norwegian	1	3,251	4,121	5,122	3,164	4,063.75	8,000
Totals	14	40,690	51,040	65,909	39,903	48,598.41	56,081

PACIFIC TO ATLANTIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From West Coast of South America to Cristobal:							*Long tons.*
British	5	3,416	5,253	6,963	3,909	$4,248.90	953
United States	4	3,109	3,224	5,731	3,392	3,872.50	3,969
Peruvian	3	3,708	7,750	12,325	6,031	4,635.00	3,663
Chilean	2	3,260	5,645	6,367	3,888	4,075.00	336
Totals	14	13,493	21,872	31,386	17,220	16,831.40	8,921
From West Coast of United States to Europe:							
British	4	13,847	16,148	20,017	12,367	17,243.05	28,293
United States	2	8,528	10,359	12,475	8,077	10,660.00	15,113
Swedish	2	7,769	10,934	12,564	9,913	9,711.25	17,956
Danish	2	7,811	8,634	11,192	7,922	9,596.60	12,172
Dutch	1	4,384	6,807	6,944	4,414	5,480.00	10,090
Norwegian	1	3,053	3,886	4,894	3,054	3,816.25	6,017
Totals	12	45,392	56,768	68,086	45,747	56,507.15	89,641
United States coastwise:							
United States	11	43,163	53,986	66,643	44,140	53,953.75	57,234
From West Coast of South America to Europe:							
British	3	8,764	12,333	14,367	9,339	10,955.00	15,170
Dutch	2	3,617	6,243	5,881	3,618	4,521.25	7,060
German	2	2,343	2,681	3,992	2,318	2,928.75	5,310
Danish	1	3,127	4,090	4,950	3,163	3,908.75	6,340
Finnish	1	2,262	2,256	2,405	2,291	2,707.20	3,611
Totals	9	20,113	27,603	31,595	20,729	25,020.95	37,491
From Australasia to Europe:							
British	10	59,191	70,456	91,044	57,335	73,669.25	40,130
From Far East to United States:							
Japanese	2	8,838	9,751	13,027	8,650	10,894.70	5,374
United States	1	3,735	4,735	5,980	3,713	4,668.75	6,403
British	1	3,570	3,934	4,377	2,823	4,462.50	5,807
Totals	4	16,143	18,420	23,384	15,186	20,025.95	17,584
From Central America to Cristobal:							
British	3	2,332	2,647	4,179	2,353	2,915.00	2,348
From West Coast of South America to East Coast of Mexico:							
Norwegian	1	4,418	5,043	6,987	4,422	3,630.96	.....
United States	1	4,328	5,089	7,058	4,327	3,664.08	.....
Totals	2	8,746	10,132	14,045	8,749	7,295.04	.....
From West Coast of Canada to East Coast of United States:							
United States	2	6,599	7,902	10,302	6,436	8,248.75	12,380
From West Coast of Canada to East Coast of Mexico:							
British	1	5,166	6,096	8,216	5,166	4,389.12	.....
From Australasia to East Coast of United States:							
United States	1	4,476	4,944	6,035	4,476	5,595.00	5,344
From Balboa, C. Z., to West Indies:							
British	1	3,407	4,299	5,948	3,714	3,095.28	.....
From West Coast of United States to East Coast of South America:							
United States	1	3,034	4,174	4,748	2,925	3,792.50	5,683
Mexican coastwise:							
French	1	2,155	2,096	2,953	1,880	1,616.25	.....
From West Coast of South America to East Coast of South America:							
United States	1	1,484	1,827	2,463	1,464	1,855.00	720
From West Coast of United States to Cristobal, C. Z.:							
United States	1	1,332	1,593	2,153	1,309	1,665.00	1,579
From Far East to British Isles:							
British	[1] 1	463	320	884	339	347.25	.....
Grand totals	89	277,379	346,175	439,973	279,071	335,421.05	335,136
May, 1921	110	360,002	450,188	563,194	358,425	422,948.68	411,412
June, 1920	99	283,640	346,325	456,128	280,766	340,970.82	409,671

[1] Yacht.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight July 9, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Guardian [1]	30	15.05	3	6.15	3	13.17			American	All-America Cables, Inc	278.0	36.0	18.6	Cristobal	Balboa	Cable, etc		1,860	950
Bessie Dollar	2	16.54	3	6.37	3	13.51	3	15.34	British	Canadian Robert Dollar Line	369.0	50.0		New York	Vancouver	Cotton, general	4,149	5,245	3,991
Steel Ranger	2	20.39	3	7.00	3	14.59	3	16.04	American	United States Steel Products Co.	424.0	56.0	26.6	New York	Honolulu	Steel and general	8,300	7,539	5,448
Garfield	2	20.34	3	9.20	3	15.39	3	16.25	American	W. R. Grace & Co	299.0	45.0	18.4	New York	Salaverry	Pipe, steel, gen	2,138	3,228	2,010
Hawkeye State	3	11.34	3	13 30	3	19.53	4	2.10	American	Matson Navigation Co. (S. B.)	517.0	72.0	27.9	Baltimore	Honolulu	General	878	15,234	10,471
Eldorado	3	21.29	4	6.10	4	13.00	4	18.48	American	Western Transport Co	245.0	42.0	19.6	New Orleans	Los Angeles	General	2,500	2,439	1,662
Durham	4	16.05	5	6.22	5	13.25	5	14.45	British	Federal Steam Navigation Co	420.0	54.0	22.0	Montreal	Auckland	General	4,495	7,138	5,296
Eastern Merchant	4	19.55	5	6.35	5	14.17	5	15.50	American	Pacific Mail Steamship Co. (S.B.)	445.0	58.0	22.0	New York	San Francisco	General	3,300	8,617	6,297
Altai Maru	5	6.32	5	6.55	5	15.12	5	17.40	Japanese	Osaka Shosen Kaisha	425.0	56.0	23.0	New York	Yokohama	General	2,856	7,903	5,635
Liberty Land	5	14.40	6	6.16	6	14.29			American	Italian Star Line	390.0	54.0	26.0	Norfolk	San Francisco	Coal for Navy	7,038	6,155	4,411
Panama	3	10.10	6	10.04	6	16.03			American	Panama Railroad Steamship Line	360.0	50.0	22.3	New York	Balboa	General	950	6,025	4,400
Ansaldo IV	5	21.25	6	13.20	6	20.53	7	17.05	Italian	Societa Nazionale di Nav	393.0	51.0	21.0	Genoa	Valparaiso	General	700	5,473	3.600
S. C. 285			6	7.07	6	15.50			American	United States Navy				Cristobal	Pedro Miguel				
Newport	1	14.30	7	6.10	7	12.55	7	16.50	American	Pacific Mail Steamship Co	326.0	38.0	17.7	Cristobal	San Francisco	General	1,329	3,173	2,163
Laurel Branch	6	11.40	7	6.21	7	13.31	7	15.00	British	F. & W. Ritson	360.0	46.0	16.11	Glasgow	Coronel	General	2,800	4,182	3,034
Barima	6–5	14.27	7	10 15	7	16.10	7	20.09	British	Pacific Steam Navigation Co	220.0	37.0	10.8	Cristobal	Tumaco	Ballast		1,651	918
Hancock County	7	6.17	7	11.35	7	18.24	7	21.05	American	N. O. and S. A. Line (S. B.)	251.0	43.0	19.4	New Orleans	Talcahuano	General	1,593	2,866	1,832
Tuscan Prince	7	13.21	7	13.33	7	20.22	7	22.00	British	Prince Line, Ltd	420.0	54.0	23.6	Philadelphia	Honolulu	General	3,494	6,947	5,029
Pakeha	7	9.40	8	6.05	8	13.10	8	14.18	British	Shaw, Saville & Albion Co., Ltd.	477.0	53.0	23.7	New York	Wellington	General	830	10,995	8,173
Guatemala	2	20.00	8	8.20	8	15.07	8	16.15	British	Pacific Steam Navigation Co	359.0	43.0	18.3	Cristobal	Valparaiso	General		4,210	2,744
Laura C. Hall	8	14.45	9	5.55	9	14.25	11	7.53	British	Pacific Metals Corporation	81.0	25.0	9.0	Cristobal	Buenaventura	General	4		
Sir Thomas J. Lipton	8	12.30	9	6.21	9	15.30	9	18.30	American	Apex Navigation Co	209.0	41.0	21.6	Norfolk	Honolulu	Coal	1,891		
Essequibo	8	12.40	9	6.36	9	13.15	9	14.24	British	Royal Mail Steam Packet Co	450.0	57.0	23.3	New York	Valparaiso	General	991	9,037	6,089
Pennsylvanian	9	6.59	9	7.59	9	14.26	9	15.30	American	American-Hawaiian Line	408.0	54.0	21.0	New York	Los Angeles	General	2,600	7,107	4,953
Libia [2]	9	9.16	9	10.05	9	17.05			Italian	Italian Government	345.0	47.0	17.0	New Orleans	Callao				
Toyooka Maru	9	6.58	9	10.10	9	18.00	9	19.30	Japanese	Nippon Yusen Kaisha	445.0	58.0	25.1	New York	Kobe	Steel, cotton, gen	6,944	7,747	5,556

[1] Cable ship. [2] Cruiser.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Edgemoor [3]	1	12.05	4	6.45	4	14.17	5	14.00	American	United States Army (S. B.)	409.6	54.2	26.6	San Francisco	New York	(4)	608	7,486	5,827
Cleveland [3]			4	6.34	4	13.12	4	13.12	American	United States Government	208.0	44.0	16.0	Balboa	Cristobal				
Natal	3	16.20	4	7.38	4	15.00	4	16.55	Danish	Orient Steamship Co	360.0	49.7	24.5	Portland	Birkenhead	Wheat	6,302	4,670	3,303
Bellbuckle	3	20.00	4	7.44	4	15.44	4	20.25	American	U. S. & Australian Line (S. B.)	395.5	55.0	26.6	Taltal	New York	Nitrate	8,827	7,285	5,25

[3] United States Army transport. [4] Quartermaster supplies, powder, etc.

Minnequa	3	23.00	4	8.10	4	16.53	4	20.50	American	Wessel Duval & Co. (S. B.)	390.0	54.2	25.6	Caleta Colosa	New Orleans	Nitrate	7,450	6,106	4,355
Jamaica	4	12.30	4	13.12	4	19.55	6	18.27	British	Pacific Steam Navigation Co	220.0	34.0	13.6	Buenaventura	Cristobal	General	705	1,187	622
Neptune[5]	3	14.40	5	6.32	5	13.50	5	17.42	American	United States Navy	520.0	65.0	21.0	San Diego	Norfolk	(6)	2,000	11,075	6,425
Ansaldo San Giorgio II	4	7.25	5	7.24	5	14.31	7	13.30	Italian	Societa Nazionale di Nav	391.7	51.5	18.0	Valparaiso	Genoa	General	1,379	5,545	3,530
Urubamba	4	22.10	5	8.06	5	15.20	11	6.00	Peruvian	Peruvian Steamship Line	381.2	46.1	21.6	Callao	Cristobal	(7)	2,081	4,803	2,951
Spectator	5	7.00	5	8.34	5	16.10	5	20.20	British	T. & J. Harrison	384.7	50.0	22.0	Los Angeles	London	General	5,537	5,128	3,697
Chiquimula	5	1.00	5	9.52	5	17.20	8	6.05	American	Chiquimula Shipping Co	176.3	36.1	10.0	La Union	Baltimore	Ballast		716	530
Iowan	5	9.00	5	10.30	5	17.35	5	17.35	American	American-Hawaiian Line	408.0	53.0	23.0	San Pedro	New York	General	4,000	7,091	5,054
Willfaro	5	9.15	5	10.43	5	18.45	5	22.30	American	Williams Steamship Co	386.8	52.2	27.0	Portland	Charleston	Lumber, general	7,200	5,680	4,162
Steel Age	5	11.55	5	12.32	5	20.30	6	6.30	American	United States Steel Products Co.	595.5	55.0	27.0	San Francisco	Liverpool	(8)	8,205	7,285	5,256
Swiftscout	4	11.55	6	6.45	6	14.50			American	Swiftsure Oil Transp. Co	464.6	60.2	23.6	Portland	Charleston	Wheat	9,973	8,473	5,988
West Hika	6	9.55	6	10.38	6	18.50	7	1.20	American	N. A. & West. S. S. Co. (S. B.)	410.0	54.4	24.0	Manila	New York	Sugar, earth	6,866	6,476	4,682
Mulpua	6	5.20	7	6.29	7	18.10	7	21.57	American	Barber Line (S. B.)	402.6	53.0	24.0	Manila	New York	(9)	6,561	6,542	4,859
Astmahco III	6	15.45	7	6.52	7	14.08	7	21.20	American	Astmahco Navigation Co	250.5	43.5	13.6	Puntarenas	Bluefields Bluff			2,425	1,635
Liberator	6	23.40	7	7.43	7	15.10	7	15.10	American	Atlantic Gulf Co. (S. B.)	410.0	56.0	27.0	Portland	New York	General	8,500	8,199	6,250
Santa Rosa	7	2.20	7	7.59	7	17.16	7	21.25	American	Grace Line	404.6	53.9	28.0	Puntarenas	New York	(10)	8,786	6,744	4,804
Shropshire	7	4.00	7	9.02	7	17.30	7	22.19	British	Birt-Potter-Hughes	526.4	61.4	26.0	Sydney	Southampton	(11)	6,559	12,368	9,011
S. C. 285			7	7.56	8	17.47			American	United States Government	110.0	16.0		Pedro Miguel	Gatun Lake				
Laura C. Hall	7	12.45	8	6.14	8	14.45	9	5.55	British	Pacific Metals Corporation	81.0	25.6	9.0	Buenaventura	Cristobal	Coffee	6	132	72
Manavi	7	16.10	8	6.26	8	13.38			British	Pacific Steam Navigation Co	216.0	35.1	14.0	Guayaquil	Cristobal	General	582	1,357	884
Santa Rosalia	8	.220	8	15.08	8	22.45	9	12.23	American	United States Steel Products Co.	406.0	52.6	20.0	Aberdeen	New York	General	4,500	5,865	4,530
Oriana	8	16.50	9	6.34	9	13.55	9	17.15	British	Pacific Steam Navigation Co	465.7	56.2	26.6	Coronel	Liverpool	General	3,898	8,620	5,345
Mahia	9	5.00	9	7.52	9	14.55	9	14.55	British	Shaw, Savill & Albion Co	477.6	63.1	24.6	Dunedin	London	(11)	10,000	11,026	7,912
Dolphin	5-31	13.06	9	8.15	9	14.30			American	United States Government	256.0	33.0	17.0	Balboa	Cristobal				
Panama	9	10.10	9	11.30	9	18.55	9	20.30	Danish	East Asiatic Co	410.0	55.2	29.0	San Francisco	Copenhagen	General	9,909	7,027	5,341

[5] Collier. [6] General and pig iron. [7] Copper, cotton, cacao, coffee, hides, etc. [8] Barley, wheat, flour, and canned goods. [9] Hemp, cocoa, and sugar. [10] Copper, ore, and nitrate. [11] Cold storage and general.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 3	Capel Hall	United Fruit Co	New Orleans.	July 3	Capel Hall	United Fruit Co	New Orleans.
July 4	Abangarez	United Fruit Co	New Orleans.	July 5	La Navarre	French Line	Puerto Colombia.
July 5	San Blas	United Fruit Co	Boston.	July 6	Pastores	United Fruit Co	New York via wayports.
July 5	Pastores	United Fruit Co	New York via wayports.	July 7	Abangarez	United Fruit Co	New Orleans via Bocas del Toro.
July 5	Teal[12]	United States Government	Norfolk.				
July 6	Advance	Panama Railroad Steamship Line	New York.	July 7	San Blas	United Fruit Co	Boston and Port Limon.
July 6	U. S. S. Hannibal	United States Navy	Grand Cayman.	July 9	Teal[12]	United States Government	United States port.
July 6	Caribbean	Panama Railroad Cattle Industry	Cartagena.	July 9	Bayano	Elders and Fyffes, Ltd	Kingston.
July 8	Cristobal	Panama Railroad Steamship Line	Norfolk.				
July 9	Allianca	Panama Railroad Steamship Line	New York.				
July 9	Bayano	Elders & Fyffes, Ltd	Port Limon.				

[12] United States tug.

PORT OF BALBOA.

July 5	Lompoc	C. T. Bowring	Taltal.	July 6	Lompoc	C. T. Bowring	Los Angeles.
July 9	Jeptha	General Steamship Corp. (S. B.)	Valparaiso.	July 9	Jeptha	General Steamship Corp. (S. B.)	San Francisco.

*Other than ships passing through the Canal.

Japanese Shipping and the Panama Canal.[1]

During the fiscal year ending June 30, 1921, 136 Japanese vessels passed through the Panama Canal carrying 767,608 tons of cargo. Their aggregate net tonnage under The Panama Canal rules was 613,245. One Japanese vessel passed through the Canal 4 times during the year, 11 three times, 25 twice, and 49 once only.

The following table shows the number of vessels under the Japanese flag which have passed through the Canal in either direction during each of the last 7 fiscal years, or since the Canal was first opened to traffic on August 15, 1914:

Year.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
1915	4	2	6
1916	19	5	24
1917	54	18	72
1918	33	20	53
1919	47	40	87
1920	84	34	118
1921	86	50	136
Totals	327	169	496

It is remarkable that in each of the years covered by the table more Japanese vessels passed through the Canal from Atlantic to Pacific than in the opposite direction. For the entire 7-year period the proportion is nearly 2 to 1. A similar preponderance of vessels in one direction has been noted in studying other features of Canal traffic. It is apparently due to the fact that cargo steamers in the trade with the Orient commonly find it more profitable to move from port to port around the world, going out via Suez and returning via Panama, or *vice versa*, than to turn back over the same route followed in the outward voyage.

Japanese Vessels Using the Panama Canal During the Fiscal Year 1921—Segregation by Trade Routes

Trade route.	Vessels.	Tons of cargo.
Atlantic and Gulf ports of United States to Far East	[2] 63	337,785
Far East to Atlantic and Gulf ports of United States	31	165,105
United States to west coast of South America	10	63,167
West coast of South America to United States and Europe	15	99,414
Cuba to Far East	5	35,135
Far East to Cuba	1	7,612
Atlantic and Gulf ports of United States to Australasia	3	20,063
Miscellaneous voyages, Atlantic to Pacific	5	23,840
Miscellaneous voyages, Pacific to Atlantic	[2] 3	15,487
Totals	136	767,608

The great majority of Japanese vessels using the Panama Canal in 1921 (94 out of 136) were in the trade between Atlantic and Gulf ports of the United States and the Far East, carrying general cargo. Five more loaded sugar and general cargo in Cuba for the Far East, and 1 discharged a cargo of rice in Cuba which was loaded in Saigon.

Ten Japanese vessels carried coal cargoes from Chesapeake Bay to the west coast of South America, and returned with nitrate for the United States or Europe. Five additional vessels, which had not passed through the Canal going south, came north with nitrate cargoes from Chile.

Of the voyages described as miscellaneous, 2 were from Buenos Aires to Kobe, 1 from Hamburg to Kobe, 1 from Nuevitas to San Fran-

[1] This is the first of a series of articles on trade through the Panama Canal, under different national flags during the fiscal year 1921, which will be published from time to time in The Panama Canal Record.

[2] Includes 1 vessel in ballast.

cisco, 1 from Tampico to Los Angeles, 1 from Portland to Alexandria, 1 from Kobe to Petrograd, and 1 from Valparaiso to Tampico.

Only 2 of the 136 Japanese vessels using the Canal passed through in ballast. One of these was bound from New Orleans to the Orient via San Francisco, and presumably picked up a cargo at the latter port. The other was bound from Valparaiso to Tampico, and returned 17 days later with an oil cargo from Tampico for Los Angeles.

The principal Japanese steamship companies that passed vessels through the Canal in 1921 were: Osaka Shosen Kabushiki Kaisha with 38 vessels; Nippon Yusen Kabushiki Kaisha with 26 vessels; Kokusai Kisen Kabushiki Kaisha with 25 vessels; Toyo Kisen Kabushiki Kaisha with 10 vessels; and Mitsui Bussan Kaisha with 7 vessels. The remaining 30 vessels in the list of 136 were distributed among 13 other owners.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended July 9:

Steamships *Guardian*, open up, clean, and repair sea valves; draw both tail shafts; rewood bearings and repack stuffing boxes; manufacture 6 spare H. P. piston rings for main engines; perform miscellaneous pipe work; straighten crank shaft of refrigerating machine and bed same in main bearings; repair spare piston rod to anchor windlass; renew hull zincs where necessary; make necessary repairs to sanitary and fresh water system; anneal steering chains and renew rollers as necessary; weld port hawse pipe; rebuild refrigerator; renew slings on port anchor; repair lifeboats and cable-handling gear; *Benjamin Brewster*, renew crosshead, pin, brasses, connecting rod, and crank-pin bearing on refrigerating system; assemble water-end valves on main feed pump; weld one double ell connection on main and auxiliary feed lines; repair steam heating system; *Liberty Land*, open up main condenser and repack and renew tubes as required; overhaul engine and lubricating system of blowers; overhaul steam end and true up plunger rods on sanitary pump; repack water end and renew one stud on water-end gland; overhaul emergency main steam stop valve and operating gear.

PREVIOUSLY REPORTED.

Supply boat *No. 2*, general repairs and docking; steamships *Lorain*, repairs to collision bulkhead, tanks, and refrigerating machine; *Paita*, perform miscellaneous wood and pipe work and repair condenser and anchor windlass; scale boilers; *Swiftscout*, repair leaks in telemotor and manufacture 4 springs; tug *Coco Solo*, install new engine; steamship *Maricopa*, miscellaneous repairs to boilers, engines, and auxiliary machinery; docking, cleaning, and painting; launch *Taboga*, general overhaul of hull; U. S. submarines *R-24*, miscellaneous repairs; welding armature core on main motors to spiders, and stiffening motor frames and foundations; *R-26*, general repairs and docking.

The following vessels were at the Cristobal shops for repairs during the week ended July 11:

Steamships *Cristobal*, *Allianca*, and *Advance*, miscellaneous repairs and painting to engine, deck, and steward departments; *Katrina Luckenbach*, renew 2 rotor bearings in starboard engine; renew 2 high-speed pinion bearings, starboard engine; open up all bearings on both engines for examination; *Urubamba*, furnish and install suction and discharge pipes and shut-off valves to sanitary pump; renew fuel-oil pipe in fireroom as directed; electric weld crack in back furnace plate of starboard boiler; furnish 10 men and foreman to clean tank tops and bilges; remove nuts and calk stays in starboard boiler where indicated; U. S. S. *Sciota*, calk 6 leaky rivets in frame, 2 at 12-foot water line; renew valve-stem guide bracket and furnish new valve stem for forced draft blower engine; manufacture new piston valve for auxiliary air and circulating pump; align cylinder with air and water cylinders; ream out steam cylinder holding down bolt holes and fit body bound bolts and dowel pins in same; fit new steam piston rings; test and repair 1 vacuum gauge and 1 pressure gauge for Clothel ice machine; machine and grind in air cock for boiler No. 2; manufacture 3 piston rings for I. P. and L. P. valve stem balance pistons; machine and grind in safety valves in boiler No. 2; repair 1 longitudinal stay bolt, boiler No. 2;

U. S. S. *Teal*, weld and machine slide valve; make new valve stem for pump; U. S. submarine *O-15*, make 600 brass screws with nuts as sample, to be 1 inch long from countersink; U. S. D. B. *L-53*, make bronze cog wheel for steering gear as sample; U. S. S. *Gold Star*, pump out oil, steam and clean fuel oil tanks; make and install oil heater coil; steamships *Caribbean*, renew nuts and washers on stay bolts in main boiler as directed; manufacture storm doors as directed; *Agron*, *Newport*, *Jamaica*, *Guatemala*, *Steel Age*, *Pastores*, *Abangarez*, *Parima*, *Manavi*, and motor ship *Lauro C. Hall*, minor repairs.

PREVIOUSLY REPORTED.

Motor ship *Satoe*, general overhauling, including dry-docking; barge *No. 117*, renewing plates, etc.; steamship *Vera Cruz*, miscellaneous repairs to main engines; U. S. S. *Forse*, miscellaneous repairs, including dry docking; barge *No. 19*, renew plates, etc.; U. S. submarine *K-25*, renew defective rivets in engine foundation and general repairs.

Cargo at Canal Terminals.

Tonnage figures for the month of June, 1921, show the following cargo handled over the Cristobal piers:

	Tons.
Total ex. cargo received	46,237
Total per cargo forwarded	35,810
Total	82,047
Rehandled (revenue not included in above)	2,472
Stevedored during the month	37,223

The following tonnage was handled at Balboa terminal piers:

Total ex. cargo received	1,340
Total per cargo forwarded	531
Total	1,871
Rehandled (revenue not included in above)	77
Stevedored during the month	454

Notice to Mariners.—Obstruction to Navigation.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 2, 1921.

CIRCULAR No. 643-90.

The master of the steamship *Montgomery City* reports by radio having passed at 1.30 p. m., on June 30, while in latitude 7° 40′ north, longitude 82° 39′ west, a large tree, about 25 feet long and 20 inches in diameter, dangerous to navigation.

JAY J. MORROW,
Governor.

Board of Local Inspectors.

The Board of Local Inspectors will meet once a month, on the first Wednesday, in Board Room (No. 237), Administration Building, Balboa Heights. No other meeting will be held unless specially called by the Chairman.

Licenses for motor-boat operators, certificates for qualified life-boat men, and able seamen, will be granted to applicants successfully passing examinations for same, in accordance with Navigation Laws, 1919. Examinations for these licenses will be given by the Board of Local Inspectors, on the first Wednesday of each month in the Board Room (No. 237), Administration Building, Balboa Heights, and on the third Wednesday of each month in the Port Captain's office, Terminal Building, Cristobal, when necessary.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending July 9, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged.	Cargo— Laded.
				Tons.	*Tons.*
La Navarre	French Line		July 5		641
Edgemoor [1]	United States Government	July 4	July 5	55	15
Jamaica	Pacific Steam Navigation Co	July 4	July 6	696½	9
Newport	Pacific Mail Steamship Co		July 7		1,416
Abangarez	United Fruit Co	July 4	July 7	1,105	124
Pastores	United Fruit Co	July 5	July 6	323	167
Ansaldo IV	Societa Nazionale di Nav	July 5	July 6	32	(2)
Urubamba	Peruvian Steamship Line	July 5		2,078	
San Blas	United Fruit Co	July 5	July 7	7	76
Caribbean	Panama Railroad Cattle Industry	July 6		475	
Advance	Panama Railroad Steamship Line	July 6		102	
Guatemala	Pacific Steam Navigation Co		July 8		90
Manavi	Pacific Steam Navigation Co	July 8		582	
Laura C. Hall	Pacific Metals Corporation	July 8	July 9	6	4
Essequibo	Pacific Steam Navigation Co	July 8	July 9	405	(2)
Cristobal	Panama Railroad Steamship Line	July 8		8,960	
Allianca	Panama Railroad Steamship Line	July 9		2,475	
Bayano	Elders & Fyffes, Ltd	July 9	July 9	14½	1

[1] U. S. Army transport. [2] No cargo laded.

Bunker Coal Prices.

By the courtesy of Willard, Sutherland & Co., of New York, the following bunker coal prices are quoted from their circular of July 1, 1921:

New York, $6.50 best quality f. a. s. ex lighters.
Philadelphia, $7 best quality t. i. b. ex lighters.
Baltimore, $7 best quality t. i. b. ex lighters.
Newport News, Sewalls Point, Lamberts Point, $6.50 f. o. b. under chutes at coal pier.
Portland Me., $9.50 t. i. b. ex lighters, $8 t. i. b. alongside suppliers' wharf.
Boston, $10 t. i. b. ex lighters.
Wilmington, $11 f. o. b. ex lighters.
Charleston, $7 f. o. b. piers.
Savannah, $7, f. o. b. piers.
Jacksonville, $10 t. i. b. alongside suppliers' wharf.
Tampa, $10.50 t. i. b. alongside suppliers' wharf.
Pensacola, $6.50 high grade Black Creek or Cahaba f. o. b. and trimmed; $6 Pratt or equal f. o. b. and trimmed.
Mobile, $6.50 high grade washed Black Creek f. o. b. under chutes.
New Orleans, $8.45 Sipsey, $7.65 Warrior River, $7.50 Pratt R/M, t. i. b. ex lighters.
Galveston, $12 t. i. b. ex lighters alongside Galveston Wharf Co. wharves.
San Diego, $16.72 Utah steam coal f. o. b. alongside docks.
Los Angeles, $15.22 Utah steam coal f. o. b. alongside docks.
San Francisco, $15.22 Utah steam coal f. o. b. ex lighters.
Seattle, $10.75 Comox steam coal f. a. s. ex lighters.
Portland, Oreg., $13.50 King (Utah) coal f. o. b. ship's hatch at bunker dock.
Astoria, $10.75 Wingate R/M.
Tacoma, $11 f. a. s. ex lighters.
Union Bay, Vancouver, $9.21 Comox steam coal f. o. b. under chutes at coal piers.
Amsterdam, 36.50 Fl. Belgian coal.
Antwerp, 65/, Belgian coal.
Azores, 85/.
Barbados, 80/.
Batavia, Fl. 47.50 to 67.50 according to quality and point of delivery.
Bermuda, $15.
Bremen, 65/ to 75/.
Bremerhaven, 65/ to 75/.
Brisbane, 18/2 to 24/4 according to quality and point of delivery.
Copenhagen, 65/.
Curacao, D. W. I., $15.75.
Dunkirk, 140 Frcs.
Emden, 65/ to 75/.
Gibraltar, 75/ plus 1/ export tax.
Hamburg, 75/ (American).
Havre, 190 Frcs. (French).
Hook of Holland, 36.50 Fl. Belgian coal.
Las Palmas, 76/.
London-Gravesend, 90/, imported coal.
Melbourne, 40/ to 43/ according to point of delivery.
Newcastle, Australia, 26/3.
Port Said, 84/ (British or American).
Rotterdam, 35 Fl. Belgian coal.
St. Lucia, 80/.
St. Thomas, V. I., 79/.
Singapore, 70/ to 95/, according to quality.
Surabaya, Fl. 47.50 to 67.50 according to quality and point of delivery.
Sydney, Australia, 32/.
Sydney Harbor, Australia, 25/3.
Trinidad, 79/.

Weather Conditions in June, 1921.

The rainfall for the month over the Canal Zone and immediate vicinity, considered as a whole, was slightly above normal. Totals ranged from 19.67 inches at Porto Bello to 4.87 inches at Taboga. The greatest amount of precipitation recorded on any one day was 4.32 inches at Porto Bello on the 21st. The estimated rainfall over Gatun Lake watershed area was 13.01 inches, compared with a 11-year mean of 11.47 inches; while over the Chagres River watershed area above Alhajuela, it was 14.69 inches, compared with a 20-year mean of 13.23 inches.

The air temperature was slightly below normal everywhere except at Gamboa and Colon, where it was slightly above normal. The atmospheric pressure, surface

temperature of the sea, and evaporation were below the normal, while the daytime cloudiness was above the normal. The relative humidity was above the normal at Balboa Heights and below the normal at Colon, while the wind movement was approximately normal over the entire Canal Zone.

A number of night and early morning fogs were observed at interior stations, all of which lifted or were dissipated by 8.30 a. m.

Seismic tremors were recorded on the 1st, 5th, and 13th.

Gatun Lake hydrology—Mean elevation of Gatun Lake was 83.38 feet; maximum elevation, 84.30 feet on the 30th; minimum elevation, 82.52 feet on the 2d; evaporation from Gatun Lake surface, 3.419 inches; rainfall on Gatun Lake drainage basin, 13.01 inches; total yield of Gatun Lake watershed was 4.79 inches on the watershed and amounted to 37 per cent of the rainfall.

Stations.	Pressure (reduced to mean of 24 hours.)	Temperature.					Mean relative humidity.	Precipitation.			Wind.				
		Mean.	Maximum.	Date.	Minimum.	Date.		Total inches.	Station average.	Days with 0.01 inch or more.	Total movement (miles).	Prevailing direction.	Maximum velocity in miles.	Direction.	Date.
Balboa Heights...	29.826	79.8	90	June 23	72	June 29	88.7	7.86	7.46	22	4.276	N.W.	26	S.	June 25
Colon.....	29.822	81.0	91	June 1	73	June 16	85.6	15.18	13.39	25	5,099	S. E.	32	N.	June 27
Gatun.....	.....	80.1	89	[1] June 1	73	[1] June 5	....	13.23	12.35	24	4,097	N. W.	28	S. E.	June 16
Gamboa....	.....	80.0	89	[1] June 3	70	June 29	....	12.81	9.70	27	2,943	N. E.	22	S. E.	June 16

[1] And other dates.

August Weather Probabilities.

The following weather conditions may be expected to prevail at the Canal entrances during the month of August, 1921. Predictions are based on the records at Colon and Balboa Heights for the past 13 and 15 years, respectively:

Winds.—The winds over the Atlantic Coast will be light and variable, with an average velocity of about 8 miles an hour. The maximum velocity during local rain or thunder squalls is not likely to exceed 35 miles an hour.

Northwest and north winds will prevail at the Pacific entrance and over the interior, with an average velocity of about 7 miles an hour. Maximum winds of 35 miles an hour may occur during the passage of rain or thunder squalls, but wind squalls of this character do not occur often, and the high winds seldom last longer than a few minutes.

Rain.—Frequent heavy showers may be expected during the month on both coasts and over the interior. The average August rainfall at the Atlantic entrance is 15 inches, and the average at the Pacific entrance is 7.91 inches.

Fogs.—Few, if any, fogs are likely to occur during the month at either Canal entrance, but night and early morning fogs will be numerous over the interior. However, all fogs that occur are likely to lift or become dissipated by 8.30 a. m.

Temperature.—The average air temperature in the shade will be approximately 80° F. on both coasts. The average daily range in temperature will be about 15° F. on the Pacific side and 8° F. on the Atlantic side. Temperatures higher than 94° or lower than 70° F. are not likely to occur during the month.

Barometric pressure.—Atmospheric pressure over the Isthmus is relatively constant and uniform, except for well-marked diurnal fluctuations. The average sea-level pressure during August should be about 29.85 inches on both coasts. The highest pressure is not likely to be more than 29.95 inches, nor the minimum to be lower than 29.70.

Relative humidity.—The relative humidity on the Isthmus is high throughout the rainy season. The average humidity for the month of August is about 85 per cent.

Storms—No severe general storms are likely to occur at either Canal entrance during the month of August. Local wind and rain squalls occur frequently, but they are of too short duration to cause a heavy sea.

The West Indian hurricane season extends from June to November. These storms pass across the Caribbean Sea and West Indian waters, but they never extend as far south as the Atlantic entrance of the Canal.

Generally cloudy weather will continue over both coasts, and smooth to moderate seas may be expected at the Pacific entrance.

Tides—Tidal fluctuations at the Atlantic entrance of the Canal are too small to affect navigation, as the average tidal range is approximately 1 foot and the maximum

range only about 2 feet. Panama tide predictions are given below. These are taken from 1921 tide tables, published by the Department of Commerce, Washington, D. C.:

Day of— W.	Day of— Mo.	Time and Height of High and Low Water.				Day of— W.	Day of— Mo.	Time and Height of High and Low Water.				Day of— W.	Day of— Mo.	Time and Height of High and Low Water.			
M	1	0:55	7:18	**1:19**	**7:53**	F	12	4:23	10:36	**5:07**	**11:18**	Tu	23	0:22	6:24	**12:40**	**8:37**
		13.7	3.2	**15.0**	**1.8**			3.9	13.4	**3.7**	**12.5**			1.5	15.4	**1.8**	**14.7**
Tu	2	1:54	8:20	**2:15**	**8:49**	S	13	5:29	11:50	**6:13**	.....	W	24	0:56	6:58	**1:19**	**7:12**
		14.8	2.0	**16.0**	**0.6**			4.5	13.0	**3.9**	.....			2.0	15.1	**2.3**	**14.2**
W	3	2:48	9:13	**3:07**	**9:38**	S	14	0:32	6:36	**12:56**	**7:17**	Th	25	1:35	7:34	**2:03**	**7:53**
		15.9	0.8	**16.9**	**-0.6**			12.5	4.7	**13.1**	**3.7**			2.7	14.7	**2.9**	**13.7**
Th	4	3:39	10:02	**3:58**	**10:24**	M	15	1:31	7:38	**1:48**	**8:12**	F	26	2:23	8:17	**2:57**	**8:42**
		16.9	-0.3	**17.5**	**-1.4**			12.9	4.3	**13.5**	**3.2**			3.4	14.1	**3.5**	**13.1**
F	5	4:29	10:48	**4:50**	**11:09**	Tu	16	2:18	8:31	**2:32**	**8:57**	S	27	3:22	9:12	**4:01**	**9:46**
		17.6	-0.9	**17.9**	**-1.8**			13.5	3.7	**14.0**	**2.5**			4.0	13.6	**3.8**	**12.6**
S	6	5:19	11:33	**5:40**	**11:53**	W	17	2:59	9:14	**3:12**	**9:36**	S	28	4:31	10:26	**5:10**	**11:13**
		18.0	-1.0	**17.8**	**-1.6**			14.1	3.0	**14.5**	**1.9**			4.2	13.3	**3.7**	**12.8**
S	7	6:09	**12:20**	**6:29**	.....	Th	18	3:37	9:51	**3:48**	**10:11**	M	29	5:44	11:51	**6:22**	.....
		17.9	**-0.7**	**17.4**	.....			14.6	2.3	**14.8**	**1.4**			4.0	13.6	**3.2**	.....
M	8	0:40	6:56	**1:09**	**7:18**	F	19	4:12	10:25	**4:24**	**10:44**	Tu	30	0:32	6:56	**1:01**	**7:30**
		-0.8	17.4	**0.0**	**16.6**			15.1	1.7	**15.1**	**1.1**			13.6	3.2	**14.8**	**2.1**
Tu	9	1:28	7:44	**2:01**	**8:07**	S	20	4:46	10:58	**4:58**	**11:16**	W	31	1:35	8:01	**2:00**	**8:29**
		0.3	16.5	**1.1**	**15.4**			15.4	1.4	**15.2**	**1.0**			14.8	2.0	**15.7**	**0.9**
W	10	2:21	8:33	**2:59**	**8:59**	S	21	5:20	11:31	**5:32**	**11:48**						
		1.6	15.4	**2.2**	**14.2**			15.6	1.3	**15.2**	**1.1**						
Th	11	3:20	9:29	**4:02**	**10:02**	M	22	5:52	**12:06**	**6:04**	.....						
		2.8	14.2	**3.1**	**13.1**			15.6	**1.4**	**15.0**	.....						

The tides are placed in the order of their occurrence; the *times* of high and low tides are shown on the upper lines. The figures in boldfaced type are hours and elevations between noon and midnight; *ante meridian* figures are given in the ordinary lightfaced type. The time is Cosmopolitan Standard for the meridian 75° W.

The *elevations* of the water are shown on the second line for each day; a comparison of consecutive heights will indicate whether it is high or low water. Heights are reckoned from mean low water springs, which is 8.3 below mean sea level and is the datum of soundings on the Coast and Geodetic Survey charts for this region. The depth of water may accordingly be estimated by adding the tabular height of the tide to the soundings, unless a minus (—) sign is before the height, in which case it is to be subtracted. The annual inequality or variation in the mean sea level is included in the predictions.

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings, or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Charles F. Johnson...	696	United States...	Pedro Miguel....	Police and Fire Div....	March 15, 1921.
Edward E. Scavey....	2078	United States...	Balboa.....	Mechanical Division...	July 2, 1921.

Official Circulars.

Army Construction Work Performed by the Canal.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 1, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

With reference to circular to heads of departments and divisions issued on the above subject under date of June 16, 1921, the Engineer of Maintenance, and in his absence the Assistant Engineer of Maintenance, is designated to represent the Canal in dealing with the Army's representative on all matters relating to construction work performed by the Canal for the Army.

JAY J. MORROW, *Governor.*

Appointment.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 9, 1921.

CIRCULAR No. 661-98:

Col. Meriwether L. Walker, U. S. Army, is hereby appointed Engineer of Maintenance, effective July 2, 1921.

JAY J. MORROW,
Governor.

Charge for Hearse Service.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 8, 1921.

CIRCULAR NO. 618–17:

Note 5 on page 8, of Circular No. 618–16, is amended to read as follows:

(5) Charge for hearse service at Colon is $2.50 for each trip, for all classes of patients except employees; free for employees.

JAY J. MORROW,
Governor.

Repairs, Accountability—Handling Furniture.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., June 29, 1921.

ALL CONCERNED: (*Corrected*):

Effective July 1, 1921, repairs to all classes of furniture, except such repairs as can be made without removing furniture from its location, will be made at Ancon planing mill under the supervision of the Constructing Quartermaster.

All surplus office and quarters furniture of every description will be stored at Ancon planing mill and carried on accountability of the Superintendent, Supply Department, for physical accounting only and invoiced accordingly.

Requests for repairs to all furniture in service should be covered by Form 431 or Work Request on the Constructing Quartermaster, which should be forwarded to the District Quartermaster for handling. All furniture shipped to the planing mill for repairs will be covered by memorandum receipts to be signed by the foreman upon arrival of the furniture, and a similar receipt will be given upon its return from the mill.

OFFICE FURNITURE.

Departments and divisions returning surplus furniture to stock will receive no financial credit therefor. When such furniture is issued, a charge will be made to cover its proportion of the total cost of repairs.

Requisitions for any office furniture will be made on the Superintendent, Supply Department, and forwarded to the Property Bureau, Balboa Heights, for approval prior to issue. If items desired are not on hand, the Property Bureau will endeavor to fill requisition by transfer from other divisions.

QUARTERS FURNITURE.

District Quartermasters will inspect and determine what repairs should be made to furniture in quarters. Cost of repairs to such furniture will be charged against operation of quarters.

R. K. MORRIS,
Chief Quartermaster.

Approved:
JAY J. MORROW,
Governor.

Misdirected Letters.

BALBOA HEIGHTS, C. Z., July 2, 1921.

Insufficiently addressed mail matter for the following has been received in the office of the Director of Posts and may be obtained upon request of the addressee. Request for forwarding may be made by telephone, calling Balboa 182.

Agnew, Richard Louis
Ahnne, Louis
Arbouin, Mrs. E. I. J.
Armond, P. E., Box 48
Bayles, Jacob, Box 63
Blackett, M. D.
Brennan, T. H.[1]
Bushnell, Chas. R.
Clower, Fred
Corregan, Miss Margaret
Davis, Miss Mary
Demuth, E. J., Box 448[1]
Duevedo, Mrs. Manola
Earl, E., Box 1819
Garrigan, L. G.
Geewzus, Carlos
Hale, P. A., Box 827
Hensley, Grover[2]
Holmes, J. G., Box 323
Honolulu Plantation Co.
Housel, Charlotte[1]
Isaac, John J.
Kaufman, W. K., Box 486
Klein, Nick
Kruzner, T. Z.
Laurence, Miss Agnes M., Box 151
Maury, James F.
Mott, C. F.
Myrick, S. S.
Nicholson, Ernest
Roberts, Mrs. A. J.
Rodriques, D. M.
Rodriquez, Leopold
Ryce, W. H., Box 775[1]
Samson, Wilfred G.
Scott, Miss Wilhelmina
Stigler, Miss Adele
Stone, Miss Elsa
Symons, William F.
Torres, Herminio
Whisler, Enoch, Box 54
Wiggins, Miss Lois

[1] Paper. [2] Registered letter.

Information Wanted.

Any person on the Isthmus having information as to the whereabouts of 2 steamer chairs, 1 child's desk with chair, 2 Crex rugs, and 2 velvet table runners, which are said to have belonged to the late Frederic Hugo Stephens at his death, is requested to communicate the same to the Administrator of Estates, Balboa Heights (telephone 182, Balboa).

Administrator's Sale.

The Administrator of Estates, room 301, Administration Building, Balboa Heights, will accept written bids up to noon Tuesday, July 26, 1921, for the purchase of certain personal property belonging to the estate of Frederic Hugo Stephens, deceased American employee of The Panama Canal. The articles to be sold comprise a wardrobe, bookstand, medicine chest, child's desk, children's games and toys, men's and ladies' wearing apparel, dishes, kitchen and laundry utensils, wall pictures, 30 furniture cushions, over 200 periodicals, and other miscellaneous household and personal effects; all of which may be examined during regular business hours at the Administrator's office. Complete detailed lists of the property offered for sale will be found posted at the Canal Zone post offices and clubhouses and may be obtained from the Administrator.

Bids may embrace the entire lot of effects or cover individual articles only. They should be submitted to the Administrator of Estates in sealed envelopes marked "Bid on Effects of Frederic Hugo Stephens, deceased." No advance deposit of money with bids is required, and the Administrator reserves the right to reject any or all bids.

Additions to Commissary Stock.

Grocery Section.

Milk, condensed, Nestle's, 14-oz. tin.....	$0.25
Milk, evaporated, St. Charles, 16-oz. tin..	.17

Hardware Section.

Ladles, soup, aluminum, ea.....	.85

COMMISSARY NOTES.

Books.

Books received:

"The Ne'er Do Well," "Main Street," "Miss Lulu Bett," "Rebecca of Sunnybrook Farm," "Natural Law of Spirit World."

Ancon Tailor Shop Discontinued.

It having been decided to discontinue operating the Ancon tailor shop, commissary patrons are notified that no orders can be accepted after the close of business, July 15.

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OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Volume XIV. Balboa Heights, C. Z., July 20, 1921. No. 49.

Departure of Special Panama Canal Commission.

The Special Commission appointed by the Secretary of War to report upon existing conditions relating to the care, maintenance, sanitation, operation, and government of The Panama Canal and the Canal Zone, which arrived on the Isthmus on June 18, has completed its investigations, and sailed for New York on the United Fruit Company's steamer *Toloa*, leaving Cristobal July 20.

BALBOA HEIGHTS, C. Z., July 19, 1921.

Col. J. J. MORROW,
Governor, The Panama Canal,
Balboa Heights, Canal Zone.

MY DEAR GOVERNOR:

The Committee is leaving the Canal Zone after a stay of over a month, during which time we have been forced to call upon you and your assistants, and in fact upon the entire Canal force, for data and general information far in excess of the ordinary demands. This work has undoubtedly been a considerable tax upon your personnel, but has been furnished promptly and well prepared as soon as the requirements were understood.

I wish that you would express to all concerned the appreciation of the Commission for the courtesy with which they have been received and for the prompt and willing compliance with all calls upon their time and knowledge.

Very sincerely,

WM. D. CONNOR,
Brigadier General, U. S. A.,
Chairman, Special Panama Canal Commission.

Slide in Gaillard Cut.

A movement in an old slide on the east side of Gaillard Cut about half a mile north of East Culebra slide occurred in the afternoon of July 14, carrying a mass of soft rock and earth toward the Canal, of which about 100,000 cubic yards entered the prism. When the movement ceased there was some shoaling entirely across the Canal, but a channel was left adjacent to the west bank about 100 feet wide and 30 feet deep. Two dipper dredges were at once put at work to remove the obstruction. Navigation was not interrupted. On July 16, 13 vessels passed through the Canal, including the battleships *Nevada*, *Oklahoma*, and *Arizona*, carrying the American Mission to Peru. By July 19 the dredges had extended the channel to a width of 175 feet and a depth of 35 feet. There has been no further movement of the slide since July 14.

Kosmos Line to Resume Service.

Advice has been received that the Kosmos Line will inaugurate a service between Europe and the west coast of South America via the Panama Canal at the end of the current year with two motor ships equipped with Diesel engines.

Classification of Cargo Passing Through the Panama Canal, Showing Origin and Destination of Same, Month of June, 1921.

COMMODITY STATISTICS.

ATLANTIC TO PACIFIC.

(Figures represent tons of 2,240 pounds.)

Commodity.	Total.	From— East coast of South America.	East coast of Canada.	East coast of Mexico.	Cristobal, C. Z.	Other Europe.	British Isles.	East coast of United States.	To— West coast of South America.	West coast of United States.	Far East.	Australasia.	West coast of Canada.	West coast of Central America.	Balboa, C. Z.	West coast of Mexico.
Aerated waters	43							43		43						
Agricultural implements	957					8	27	922	283	154		520				
Asphalt	455							455	235			220				
Automobiles	118				6	12	3	97	51		8	53		6		
Beeswax	300							300			300					
Borax	4					4			4							
Cacao	106						106			91			15			
Canned goods:																
Fish	62					8		54	8	54						
Fruit	70				70				70							
Meat	200						200			200						
Milk	220							220	220							
Vegetables	550		250					300		300			250			
Cement	5,394				74	2,856	649	1,815	5,276	38		80				
Cereals	46							46		46						
Chemicals	193				5	15	47	126	86	5	57	20	20	5		
Chocolate	23							23		23						
Coal	15,455							15,455	7,227		25	2,673		1,745		3,785
Coffee	581	475						106		424	157					
Cold storage (lard)	134				134				134							
Cork	12				12				12							
Cotton, raw	11,997							11,997			11,997					
Cotton seed	140					56	84		56	84						
Cotton seed oil	55							55	55							
Earthenware	12						12						12			
Explosives	39							39		39						
Flour	47				20			27	47							
Glassware	1,604					1,574		30		1,574	30					
Hats	1							1		1						
Linoleum	265							265		265						
Liquors	437				56	218	163		201	11		27	198			
Lumber	121							121	121							

Manufactured goods:																
Iron and steel	60,923				368	4,760	1,731	54,064	8,433	30,805	16,709	3,888	335	753		
Machinery	7,030				179	300	356	6,195	4,572	1,279	384	750	5	40		
Railroad material	3,434				33	265	730	2,406	508		2,196	700	30			
Textiles	964				114	50	205	595	603	304			57			
Other	2,170					30	501	1,639	1,068	1,084			18			
Metals:																
Iron	3,113					2,073	40	1,000		2,073	1,000	40				
Copper	220							220		220						
Musical instruments	25							25		25						
Oats	60							60		60						
Oils:																
Crude	98,099			72,140		110	15	25,834	30,361	20,048	15,999	80	21,857		7,183	2,571
Refined	30,598				11	5		30,582	704		22,057	7,837				
Coconut	5						5					5				
Linseed	22						2	20	2	20						
Olive	45							45		45						
Vegetable	495				2		493		495							
Ores:																
Copper	83							83		83						
Manganese	115						115			115						
Nitrate	60							60		60						
Paint	60						6	54	8	46			6			
Paper	751				6	177	10	558	183	458	100	10				
Rice	483				110			373	483							
Rosin	1,034				12			1,022	34		1,000					
Rubber, manufactured	52					2		50	52							
Salt	456	456							456							
Skins and hides	10							10			10					
Soap	9				9				9							
Soda, ash	191					191				191						
Sulphur	11,700							11,700		2,750		2,150	6,800			
Tar	100							100	100							
Tea	32						32			32						
Tobacco	450				5		1	444	21	59	370					
Toys	218							218		218						
Turpentine	4							4	4							
Wax, paraffin	615							615	350		265					
Wood, dye	10							10			10					
Wool	75					75			75							
General	96,277	23	286		7,446	14,150	3,149	71,223	8,321	45,818	18,303	18,903	286	4,646		
Totals	359,585	954	536	72,140	8,672	26,748	8,829	241,706	70,884	109,145	90,977	37,956	29,889	7,195	7,183	6,356

PACIFIC TO ATLANTIC.

(Figures represent tons of 2,240 pounds.)

Commodity.	Total.	From—							To—					
		Hawaiian Islands.	West coast, Central America.	West coast of Canada.	Australasia.	Far East.	West coast of United States.	West coast of South America	East coast of United States.	British Isles.	Other Europe.	Cristobal, C. Z.	West Indies.	East coast of South America.
Alcohol	119						119		119					
Automobiles	8		5		3					3	5			
Auto accessories	20						20		17		3			
Balsa	150							150						150
Balsam	4		4								4			
Bark:														
Cascara	5							5				5		
Graperoot	2						2		2					
Orchilla	30							30				30		
Peruvian	31							31		30		1		
Quillay	269							269			269			
Barley	18,932				27		15,512	3,393		10,859	8,073			
Beans and peas	3,519				1,200	100	1,215	1,004	1,550	1,200	652	20	97	
Beeswax	2							2				2		
Cacao	3,889				41			3,848	547	41	423	2,878		
Canned goods:														
Fish	3,647			780			2,867		2,812		827		8	
Fruit	4,931	795			32		4,104		4,478	232	221			
Meat	346				116		230		230	116				
Milk	557				89		468		468	89				
Other	1,181						1,175	6	1,175			6		
Coffee	11,084		8,049					3,035	1,743		3,517	5,454		370
Cold storage:														
Beef	11,192				11,192					11,192				
Butter	259				259					259				
Casein	204				204					204				
Cheese	3,941				3,941					3,941				
Mutton	12,914				12,914					12,914				
Tallow	1,603				1,573		30		30	1,573				
Other	4,512				4,484		28		28	4,484				
Copra	750					750			750					
Corn	300							300			300			
Cotton, raw	1,141						100	1,041	100	701		340		
Cotton seed	1,704							1,704		1,699		5		
Cotton seed oilcake	836							836		736	100			
Explosives	5						5		5					
Flour	5,217						5,217		58	2,500	2,659			

Fruit:														
Dried	2,872						2,872		1,500		1,372			
Fresh	1,374						1,374		1,374					
Gum, Kauri	27				27					27				
Hats	8							8	1			7		
Hay	171						96	75	96			75		
Hemp	564					564			564					
Honey	228							228			228			
Horns and hoofs	80							80			80			
Iodine	32							32	22	10				
Ivory nuts	2,932							2,932	959		455	1,518		
Leather	5						5		5					
Liquors	7							7				7		
Lumber	31,402			914		100	30,388		31,402					
Manufactured goods:														
Iron and steel	30				30				30					
Machinery	5						5		5					
Textiles	2						2		2					
Other	1						1		1					
Metals:														
Copper	9,525			1,056			4,757	3,712	5,975		1,000	2,550		
Gold and silver	37							37		37				
Lead	53						36	17	36			17		
Tin	1,350							1,350	1,160	190				
Milk, powdered	549				404		145		145	404				
Nitrate	58,801							58,801	48,106	5,020	5,675			
Oil:														
Crude	2						2		2					
Coconut	1,361					1,351	10		1,361					
Refined	7,248						7,248			7,248				
Vegetable	3							3				3		
Oats	6,175							6,175		3,345	2,830			
Onions	950						950		950					
Ores:														
Copper	1,030							1,030	1,000					30
Gold and silver	145							145		3	140	2		
Iron	5,040				5,040				5,000	40				
Tin	795							795	540	255				
Zinc	1,400							1,400			1,400			
Other	120							120						120
Paper	17					17			17					
Peanuts	2			2					2					
Potatoes	7							7				7		
Rice	6,436					137	6,299		882				5,554	
Rubber	28						28		28					
Rubber, raw	5							5				5		
Rye	250						250				250			
Seed (mustard)	36						36		36					
Silk	40					40			40					
Skins and hides	1,970		28		1,112	355	271	204	831	925	62	102		50
Sugar	10,821		3			8,200		2,618	9,214	1,604		3		

(Continued on page 764, column 2.)

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight July 16, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Balboa	6-27	13.17	10	8.10	10	15.10	10	16.05	American	Colombian Maritime Co	190.0	29.0	11.2	Cristobal	Buenaventura	Ballast		741	350
West Nomentum	9	21.00	10	11.55	10	18.22	10	19.10	American	Sudden & Christensen	410.0	54.0	17.1	Liverpool	Los Angeles	General	483	6,583	4,914
Pleiades	10	12.30	10	13.46	10	21.00	10	22.35	American	Luckenbach Line	331.0	47.0	19.3	New Orleans	San Francisco	General	2,358	4,147	3,259
Urubamba	5	15.20	11	6.00	11	12.54	11	14.00	Peruvian	Peruvian Steamship Co	381.0	41.0	19.8	Cristobal	Callao	General	296	4,803	2,951
Eastern Planet	12	5.45	12	6.29	12	14.02	12	20.50	American	U. S. & Australian Line	384.0	51.0	26.6	New York	Lyttleton	Oil, and general	5,085	6,235	4,480
Somersetshire	10	7.48	12	6.38	12	14.40	12	15.40	British	Libby Brothers	450.0	57.0	17.0	London	Vancouver	General	181	8,669	5,978
Author	12	2.50	12	7.45	12	14.52	12	15.40	British	Harrison Line	423.0	53.0	19.0	Liverpool	San Francisco	General	2,500	6,382	4,614
Canadian Spinner	12	6.36	12	8.21	12	16.44	12	18.18	British	Canadian Government	400.0	52.0	25.0	New York	Brisbane	General	6,000	5,871	4,094
Manavi	8	13.38	13	6.05	13	13.07	13	14.18	British	Pacific Steam Navigation Co	216.0	35.0	11.7	Cristobal	Guayaquil	General	62	1,357	884
Western Knight	12	1.20	13	6.20	13	15.50			American	Pacific Steamship Co. (S. B.)	426.0	54.0	25.0	Norfolk	Pearl Harbor	Coal for Navy	6,755	6,546	4,557
City of Lincoln	12	18.07	13	6.48	13	16.50	13	18.25	British	Hall Steamship Line	422.0	53.0	23.6	New York	Auckland	General	4,025	7,026	5,323
San Blas			13	6.55	14	11.30	14	13.40	Panaman	Panaman Government	110.0	21.0		Colon	Balboa				
Almirante [1]			13	6.55	14	11.30	14	13.40	Panaman	Panaman Government				Colon	Balboa				
Jules Michelet [2]	12	6.48	13	6.40	13	14.37	17	11.55	French	French Government	485.0	70.0	28.0	Porto Barrios	Callao				
Katrina Luckenbach	7	15.22	13	6.50	13	16.02			American	Luckenbach Line	485.0	70.0	23.8	New York	San Francisco	General	5,000	8,508	6,179
Adventuress [3]	13	16.15	14	6.25	14	15.10	16	18.45	American	G. L. Seaburg	60.0	14.0	9.0	New York	Tahiti			16	23
Dolphin [4]	9	14.30	14	7.55	14	14.15			American	United States Navy	256.0	33.0	17.0	Cristobal	Balboa				
Denmark Maru	14	9.07	14	9.42	14	15.57	14	17.05	Japanese	Kawasaki Kisen Kaisha	385.0	51.0	18.6	Galveston	Yokohama	General	1,700	5,926	4,398
Jamaica	12	5.35	15	9.37	15	16.49	15	21.15	British	Pacific Steam Navigation Co	220.0	34.0	14.2	Pto. Colombia	Tumaco	General	682	1,187	622
Henry S. Grove	15	8.57	15	10.45	15	19.05	15	22.47	American	Atl. Gulf & Pacific S. S. Corp	404.0	54.0	26.6	Mobile	San Diego	General	6,000	6,755	4,688
Empire State	14	23.45	15	12.07	15	19.43	16	14.25	American	Pacific Mail Steamship Co. (S.B.)	516.0	72.0	24.1	Baltimore	San Francisco	General	30	15,286	10,493
Arizona [5]	16	6.29	16	6.50	16	17.52	18	11.28	American	United States Navy	608.0	97.0	29.6	New York	Callao				
Oklahoma [5]	16	6.37	16	6.55	16	18.06	18	11.28	American	United States Navy	583.0	95.0	29.0	New York	Callao				
Nevada [5]	16	6.40	16	8.10	16	19.42	18	11.28	American	United States Navy	583.0	95.0	29.0	New York	Callao				
Huasco	13	13.35	16	8.23	16	18.51	16	19.50	Chilean	South American Steamship Line	379.0	44.0	21.8	Cristobal	Valparaiso	General	420	4,552	3,182
La Paz	15	6.17	16	8.38	16	19.56	17	19.38	British	Pacific Steam Navigation Co	416.0	54.0	16.0	Rotterdam	Valparaiso	General	2,190	7,216	4,912
Knight Templar	15	16.55	16	9.09	16	20.49	16	21.57	British	Alfred Holt & Co	470.0	58.0	24.11	New York	Shanghai	General, cotton	5,659		
Willhilo	15	23.45	16	10.00	16	21.35	16	22.32	American	Williams Steamship Co	434.0	58.0	22.0	New York	Los Angeles	General	4,000	7,983	5,882
Salvador	11	12.50	16	9.43	16	20.54	16	22.04	British	Pacific Steam Navigation Co	215.0	33.0	13.6	Cristobal	Champerico	General		1,213	692
Keifuku Maru	16	7.15	16	10.18	16	21.45	16	22.53	Japanese	Kawasaki Dockyard Co	385.0	51.0	27.7	Galveston	Yokohama	General	7,500	5,919	4,400
San Joaquin	16	10.05	16	11.25	16	22.18	17	18.43	Norwegian	W. Wilhelmsen	425.0	57.0	17.0	Tampico	Port San Luis	Ballast		7,059	5,043

[1] Launch, towing *San Blas*. [2] Cruiser. [3] Yacht. [4] Gunboat. [5] Battleship.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Tasmania	9	17.30	10	6.35	10	13.34	10	15.25	British	New Zealand Steamship Corp.	484.5	62.7	22.0	Lyttleton	London	(8)	4,382	9,460	6,605
Canadian Carrier	10	6.45	10	7.52	10	15.11	10	21.00	British	Canadian Government	319.6	44.2	20.0	Vancouver	Montreal	Lumber	2,963	3,163	2,042
Waimate	9	23.30	10	7.59	10	15.30	10	15.30	British	New Zealand Shipping Co.	420.0	54.0	19.6	Wellington	London	(9)	3,156	7,198	5,425
Salvador	10	17.00	11	6.35	11	12.50	16	21.43	British	Pacific Steam Navigation Co.	215.0	33.5	16.8	Champerico	Cristobal	(10)	813	1,213	692
Eastern Sailor	10	22.00	11	8.45	11	17.12	12	19.08	American	Williams Dimond Co. (S. B.)	415.0	55.6	28.0	Tacoma	Glasgow	General	8,690	7,704	5,707
Aurora [2]	11	8.00	11	8.55	11	15.35	12	15.27	British	British Navy	436.0	39.0	15.0	Esquimalt	Halifax	.....	.....	.....	.....
Patriot [6]	11	8.00	11	9.00	11	15.52	12	15.14	British	British Navy	265.0	25.1	9.2	Esquimalt	Halifax	.....	.....	.....	.....
Patrician [6]	11	8.00	11	9.04	11	16.05	12	15.10	British	British Navy	265.0	25.1	9.0	Esquimalt	Halifax	.....	.....	.....	.....
Santa Elisa	11	3.30	11	9.38	11	17.40	11	21.45	American	W. R. Grace & Co.	360.3	51.7	23.1	Talcahuano	New York	General	1,331	5,957	4,325
Junin	12	4.00	12	8.06	12	15.21	12	17.23	British	Pacific Steam Navigation Co.	391.5	50.2	25.0	Talcahuano	London	General	5,303	5,930	4,395
Almirante [1]	12	6.00	12	8.13	12	15.25	.....	.....	Panaman	Panaman Government	.....	.....	.....	Panama	Colon	.....	.....	.....	.....
Potosi	10	17.50	12	13.54	12	22.30	12	23.58	British	Pacific Steam Navigation Co.	381.0	49.0	23.0	Coronel	Europe	Grain, cotton, etc.	5,824	5,567	4,296
Huasco	11	23.00	13	6.19	13	13.35	16	20.23	Chilean	Chilean Line	379.7	44.3	18.8	Valparaiso	Cristobal	General	225	4,552	3,182
Port Victor	12	19.15	13	6.20	13	14.30	13	16.48	British	Commonwealth and Dom. Line	470.0	58.2	25.6	Melbourne	Hull	(9)	7,491	9,336	6,682
Sussex	13	7.40	13	8.26	13	17.55	13	20.35	British	Federal Steam Navigation Co.	420.0	54.0	27.0	Mauen	England	Phosphate	7,500	7,016	5,078
Buenos Aires	13	8.37	13	10.52	13	18.45	15	21.55	Swedish	Axel Axson Johnson	426.9	56.2	27.6	Vancouver	La Havre	(11)	8,041	7,591	5,661
South American	13	18.45	14	6.41	14	13.42	14	16.05	British	South American Steamship Co.	251.0	43.6	20.6	Arica	New York	(12)	3,176	2,444	1,593
R-26 [7]	6-12	15.02	14	7.40	14	14.40	.....	.....	American	United States Navy	175.0	16.0	.....	Balboa	Cristobal	.....	.....	.....	.....
Belridge	14	0.15	14	7.50	14	14.47	14	16.49	Norwegian	W. Wilhelmsen	425.1	57.0	20.0	Tocopilla	Port Arthur	Ballast	.....	.....	.....
Ucayali	14	5.00	14	8.11	14	15.30	.....	.....	Peruvian	Peruvian Line	374.7	46.3	18.6	Callao	Cristobal	General	987	4,466	2,405
San Fernando	14	5.12	14	9.02	14	16.40	14	16.40	British	Eagle Oil Transport. Co.	530.4	69.4	23.0	Singapore	Tampico	Ballast	.....	13,266	9,609
San Jose	14	14.15	15	9.35	15	20.00	.....	.....	American	Pacific Mail Steamship Co.	283.6	37.0	14.0	San Francisco	Cristobal	Coffee, general	243	2,352	1,602
West Kedron	15	9.47	15	10.32	15	21.35	.....	.....	American	Williams Dimond Co. (S. B.)	410.5	54.3	24.8	Portland	Immingham	(13)	6,865	6,572	4,912
Bologna	15	14.00	16	6.30	16	16.10	.....	.....	Italian	La Veloce Line	384.9	46.7	18.6	Valparaiso	Genoa	General	1,425	5,531	4,982
Point Benita	15	12.00	16	6.34	16	16.21	.....	.....	American	Pacific Mail Steamship Co.	289.0	44.1	19.1	San Francisco	Baltimore	(14)	1,405	2,895	1,993
Gallic	16	3.19	16	8.01	16	17.35	16	18.30	British	White Star Line	450.0	58.0	22.0	Lyttleton	London	Frozen meat	3,293	8,278	5,404

[6] Destroyer. [7] Submarine. [8] Wool, tallow, and general. [9] Cold storage and general. [10] Coffee, hides, and balsam. [11] Cotton seed, flour, barley, etc. [12] Copper ore, nitrate, and walnuts. [13] Barley, flour, beans, etc. [14] Coffee, cotton, and general.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 10	Metapan	United Fruit Co.	New Orleans.	July 10	Caribbean	Panama Railroad Cattle Industry	Cartagena.
July 11	Heredia	United Fruit Co.	New Orleans.	July 10	Metapan	United Fruit Co.	Bocas del Toro.
July 12	Ulua	United Fruit Co.	New York via Habana.	July 11	Hannibal	United States Navy	High seas.
July 12	Buenos Aires	Spanish Line	Barcelona.	July 11	Advance	Panama Railroad Steamship Line	New York via Haiti.
July 13	Metapan	United Fruit Co.	Bocas del Toro.	July 12	Cristobal	Panama Railroad Steamship Line	Norfolk.
July 13	Columbia	N. O. and S. A. S. S. Line	New Orleans.	July 13	Columbia	N. O. and S. A. S. S. Line	New Orleans and Porto Barrios.
July 13	Santa Marta	United Fruit Co.	New York via Jamaica.				
July 13	Sixaola	United Fruit Co.	Puerto Colombia.	July 13	Metapan	United Fruit Co.	New Orleans.
July 16	San Bruno	United Fruit Co.	Port Limon.	July 13	Ulua	United Fruit Co.	New York via Port Limon

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL—continued.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 16	Hannibal	United States Navy	Grand Cayman.	July 14	Sixaola	United Fruit Co	New York.
July 16	Benedict	Booth Steamship Co	Liverpool via wayports.	July 14	Santa Marta	United Fruit Co	Puerto Colombia.
				July 14	Allianca	Panama Railroad Steamship Line	New York.
				July 14	Heredia	United Fruit Co	New Orleans via Bocas del Toro.
				July 15	Buenos Aires	Spanish Line	Puerto Colombia.
				July 16	San Bruno	United Fruit Co	Boston.

PORT OF BALBOA.

July 10	Seiyo Maru	Toyo Kisen Kaisha	Hongkong.	July 12	Paita	Peruvian Government	Callao.
				July 12	Seiyo Maru	Toyo Kisen Kaisha	Valparaiso.
				July 15	España	Spanish Government	Callao.

*Other than ships passing through the Canal.

COMMODITY STATISTICS.—PACIFIC TO ATLANTIC—Continued from page 761.

(Figures represent tons of 2,240 pounds.)

Commodity.	Total.	From—							To—					
		Hawaiian Islands.	West coast of Central America.	West coast of Canada.	Australasia.	Far East.	West coast of United States.	West coast of South America.	East coast of United States.	British Isles.	Other Europe.	Cristobal, C. Z.	West Indies.	East coast of South America.
Tea	590					560		30	590					
Tobacco	62				60		2		62					
Walnuts	140			47				93	140					
Wheat	58,261						55,260	3,001		22,546	35,715			
Wool	4,623	54			2,164	425	1,980		2,459	2,164				
General	24,220		15	457	562	4,136	14,299	4,751	19,219	4,322	89	566		24
Totals	335,136	849	8,104	3,256	45,474	16,735	157,408	103,310	147,868	100,913	66,349	13,603	5,659	744

Norwegian Shipping and the Panama Canal.[1]

The following is a statement of the Norwegian vessels passing through the Panama Canal in either direction during each fiscal year since the inauguration of traffic in August, 1914.

Year.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
1915	16	26	42
1916	19	26	45
1917	74	76	150
1918	145	151	296
1919	56	72	128
1920	46	60	106
1921	76	64	140
Totals	432	475	907

It will be noted that the transits were most numerous during the 2 last years of the war, 1917 and 1918. The following year, 1919, was marked by a sharp decline, which continued through 1920. There was an increase in 1921, but the figures are still far below the 1918 peak. Passages from Pacific to Atlantic have exceeded those in the opposite direction, but the difference is not great.

NORWEGIAN SHIPPING USING THE PANAMA CANAL DURING THE FISCAL YEAR, 1921
SEGREGATION BY TRADE ROUTES.

Trade route.	Vessels.	Cargo tons.
Mexico to west coast of South America	22	205,666
West coast of South America to Mexico	23	.....
Mexico to Balboa	2	19,500
Balboa to Mexico	2	.....
Mexico to west coast of United States	2	19,300
Atlantic and Gulf ports of United States to west coast of South America	24	116,038
West coast of South America to Atlantic and Gulf ports of United States	[2] 21	99,910
Europe to west coast of United States	[2] 8	32,107
West coast of United States to Europe	9	61,577
Europe to west coast of South America	[2] 7	17,769
West coast of South America to Europe	8	48,912
Atlantic and Gulf ports of United States to Australasia	3	16,250
East coast of United States to west coast of United States	3	.....
East coast of South America to west coast of United States	3	.....
East coast of South America to west coast of South America	[2] 2	108
West coast of United States to Cuba	1	750
Totals	140	637,887

Of the 140 voyages through the Canal under the Norwegian flag in 1921, 51 were made by a fleet of four tankers under time charter to an American oil company and used in the trade between the Mexican oil fields and South America, with occasional voyages from Mexico to Balboa and the west coast of the United States. One of these tankers passed through the Canal 16 times, two 15 times each, and one 5 times. Their return voyages were made in ballast.

In the trade between Atlantic and Gulf ports of the United States and the west coast of South America 17 of the 24 southbound vessels carried coal cargoes. Of the 21 northbound vessels 10 carried nitrate, 3 copper bars, 1 copper and silver ore, 1 sugar, 1 cacao, and 4 general cargo.

In the trade between Europe and the west coast of South America all of the 8 northbound vessels carried nitrate cargoes.

The majority of the sailings in the trade between Europe and the west coast of the United States were due to a fleet of 3 modern motor

[1] This is the second of a series of articles on trade through the Panama Canal under different national flags during the fiscal year 1921.

[2] Total includes 1 vessel in ballast.

ships maintaining a regular bimonthly service. Two of these motor ships passed through the Canal 5 times during the year, and one 4 times. Of the 9 cargoes from the west coast to Europe 2 were wheat, 2 flour, 2 general, 1 barley, 1 barley and general, and 1 flour and general.

Of the 3 cargoes from the United States to Australasia 2 were sulphur shipped from Gulf ports and 1 case oil shipped from New York.

The principal Norwegian owners interested in the Canal traffic during 1921 were: Wilh. Wilhelmsen whose vessels made 55 transits; Fred Olsen & Co., 14; Bruusgaard Kiosteruds Dampskibsaktieselskab, 9; Grefstads Rederi, 6; and Nordenfjeldske Dampskibselskab, 5.

Commercial Traffic Through the Panama Canal for the Fiscal Year 1921, by Nationality of Vessels.

Below is shown in tabular form the commercial traffic through the Panama Canal for the fiscal year 1921, by nationality of vessels. An analysis of this traffic shows American and British vessels far in the lead of those of any other nation. In cargo tons, American vessels carried approximately 45 per cent of the total traffic passing through the Canal, and British vessels 32 per cent, with Japanese vessels third with approximately 7 per cent, and Norwegian vessels fourth with a little less than 6 per cent. The vessels of these four countries carried 89 per cent of the commercial cargo through the Canal.

For 1921, the tons of cargo passing through the Canal was greater by 23½ per cent than for any previous fiscal year. The tonnage and tolls have kept pace with the cargo; the tolls for the past fiscal year, exceeding by $2,762,956.46, or 32½ per cent, the greatest amount collected during any preceding fiscal year.

	No. of ships.	Tonnage.				Tolls.	Tons of of cargo.
		United States equivalent.	Panama Canal net.	Registered gross.	Registered net.		
Belgian	2	6,309	8,092	10,144	6,188	$7,886.25	12,700
Brazilian	1	3,511	4,566	5,472	3,523	4,388.75	6,700
British	970	3,230,830	3,965,613	5,035,686	3,150,061	3,976,395.33	3,721,932
Chilean	63	104,727	159,727	201,231	116,413	147,023.75	61,737
Chinese	4	10,564	12,098	16,645	10,624	13,187.10	14,400
Costa Rican	16	2,606	2,784	2,983	1,971	2,952.78	2,112
Cuban	1	578	702	1,050	577	722.50	1,200
Danish	60	197,504	236,512	287,579	188,667	241,411.86	322,059
Dutch	50	185,561	248,801	279,261	182,151	229,248.94	216,488
Finnish	2	4,293	4,281	4,620	4,361	5,137.20	7,101
French	44	143,113	155,889	204,727	134,638	164,575.94	132,836
German	19	51,561	67,334	81,023	50,421	62,908.95	73,837
Italian	25	82,610	102,783	147,507	87,689	103,206.60	47,988
Japanese	136	538,205	613,245	808,961	527,693	655,176.51	758,617
Jugo-Slav	2	3,902	4,508	6,370	4,068	4,877.50	8,325
Mexican	4	4,133	5,032	5,884	3,553	4,354.36	3,785
Norwegian	140	462,890	548,227	719,138	453,777	523,311.94	637,887
Panaman	8	1,382	1,370	1,568	1,340	1,463.50	1,500
Peruvian	60	86,786	157,495	239,045	127,292	107,160.64	105,322
Russian	4	9,725	11,279	15,844	8,641	12,156.25	11,343
Spanish	44	101,141	117,400	155,150	100,995	118,548.41	143,076
Swedish	25	74,665	113,661	119,810	90,134	93,331.25	128,919
United States	1,212	4,037,270	4,874,477	6,172,717	3,984,464	4,797,463.60	5,179,350
Totals	2,892	9,343,866	11,415,876	14,522,415	9,239,241	11,276,889.91	11,599,214

In addition to the commercial traffic, as shown above, 426 Government vessels transited the Canal during the fiscal year, with tonnage as follows:

Panama Canal net tonnage	467,503
Displacement tonnage	[1]898,663

These vessels transited the Canal free of tolls, carrying 453,769 tons of merchandise.

[1]Displacement tonnage represents battleships, cruisers, etc., where Panama Canal tonnage is not obtainable.

Repairs to French Cruiser.

The French cruiser *Jules Michelet*, while transiting the Canal on the 13th instant, en route with the mission to attend the Centennial Celebration of the Republic of Peru, was damaged by striking the bank of the Canal, just north of Gamboa, at about 10.45 a. m., on account of steering gear failure.

The Mechanical Division was informed by telephone a few hours later that dry-docking would be necessary, and immediately arrangements were made for a representative of the division to board the vessel at Miraflores Locks to obtain the docking plans and such information as was available regarding the nature and extent of the damage.

Preparations were promptly made for docking the cruiser. It was necessary to refloat the dredge *Gamboa*, which was then in the dry dock. The cruiser was docked late in the afternoon of July 14 and everything was in readiness, so that within 15 minutes after the dock was unwatered and pumping stopped, work was commenced on the damaged hull. The vessel was undocked 48 hours later.

The damage consisted of several bad dents in the shell plating, and a number of frames sprung; also the forward end of the starboard bilge keel was badly bent and torn. Several compartments were flooded through the opened seams and rivet holes.

The repair work, which was of a temporary nature as requested by the commanding officer, consisted of cutting out and redriving several hundred loose rivets, and calking seams from E to H strake, starboard side, from frames 16 to 40; installing 5/16-inch doubling plate on G–H strake from frames 25 to 31; installing wood filler and 3/16-inch chafing plate under the bottom of the armor belt, frames 12 to 40; pouring concrete in the wake of the worst damage at seam on G–H strake from frames 12 to 20, and from the protective deck to the first stringer at bulkheads 20, 24, and 27. Also the ragged portion of the bilge keel was burned off and the edges reriveted and welded up.

The commanding officer of the vessel expressed himself in a letter to the Superintendent of the Mechanical Division, as being highly pleased with the work performed and gratified at the speed with which it was handled.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending July 16, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged.	Cargo— Laded.
				Tons.	*Tons.*
Speaker	Harrison Line	July 2	July 2	.....	24
Hawkeye State	United States Shipping Board	July 3	July 3	.....	5
Ansaldo San Giorgio II	Societa Nazionale di Navigazione	July 4	July 5	1	.....
Jamaica	Pacific Steam Navigation Co	July 4	July 4	1	.....
Neptune	United States Navy	July 3	July 5	3	.....
Panama	Panama Railroad Steamship Line	July 6	.....	1,000	.....
Newport	Pacific Mail Steamship Co	July 7	July 7	.....	13
Ansaldo IV	Societa Nazionale di Navigazione	July 7	July 7	101	.....
Manavi	Pacific Steam Navigation Co	July 7	July 8	10	.....
Laura C. Hall	Pacific Metals Transportation Co	July 7	July 8	8	.....
Laura C. Hall	Pacific Metals Transportation Co	July 9	July 9	.....	67
Seiyo Maru	Toyo Kisen Kaisha	July 10	July 12	686	.....
Salvador	Pacific Steam Navigation Co	July 10	July 10	3	.....
Huasco	South American Steamship Line	July 12	July 12	80	.....
San Jose	Pacific Mail Steamship Co	July 14	July 15	7	.....
Point Bonita	Pacific Mail Steamship Co	July 15	July 16	203	.....
Jamaica	Pacific Steam Navigation Co	July 15	July 15	4	23
Empire State	United States Shipping Board	July 16	July 16	.....	2
Cauca	Pacific Steam Navigation Co	July 16	July 16	2	.....

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending July 16, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged.	Cargo— Laded.
				Tons.	*Tons.*
Caribbean	Panama Railroad Cattle Industry		July 10		107¼
Metapan	United Fruit Co	July 10	July 10	(1)	72
Urubamba	Peruvian Steamship Line		July 11		312
Advance	Panama Railroad Steamship Line		July 11		891
Somersetshire	Pacific Steam Navigation Co	July 10	July 12	5	(2)
Manavi	Pacific Steam Navigation Co		July 13		2½
Heredia	United Fruit Co	July 11	July 14	987	223
Salvador	Pacific Steam Navigation Co	July 11	July 16	813	396½
Jamaica	Pacific Steam Navigation Co	July 12	July 15	122½	123¼
Ulua	United Fruit Co	July 12	July 13	560	164
Buenos Aires	Spanish Line	July 12	July 15	350	492
Metapan	United Fruit Co	July 13	July 13	3	10
Columbia	N. O. & S. A. S. S. Co	July 13	July 13	610	263
Sixaola	United Fruit Co	July 13	July 14	48	½
Allianca	Panama Railroad Steamship Line		July 14		1,392
Santa Marta	United Fruit Co	July 13	July 14	39	683
Huasco	Chilean Steamship Line	July 13	July 16	243	415
Ucayali	Peruvian Steamship Line	July 14		968	
San Jose	Pacific Mail Steamship Co	July 15		243	
La Paz	Pacific Steam Navigation Co	July 15	July 16	39	(2)
Venezuela	Pacific Mail Steamship Co	July 15		63	
San Bruno	United Fruit Co	July 16	July 16	25	8
Point Bonita	Pacific Mail Steamship Co	July 16		573	
Benedict	Pacific Steam Navigation Co	July 16		120	
Hector	Royal Netherlands W. I. Mail	July 16		294	

[1] No cargo discharged. [2] No cargo laded.

A Statement of Commercial Traffic Through the Panama Canal from its Opening to Date.

Herewith is given a comparative statement of the commercial traffic passing through the Panama Canal from its opening on August 15, 1914, to June 30, 1921. In the instances where tonnage figures have been omitted, it is due to incomplete records being kept during the early years of Canal traffic.

	No. of ships.	Tonnage. United States equivalent.	Tonnage. Panama Canal net.	Tonnage. Registered gross.	Tonnage. Registered net.	Tolls.	Tons of cargo.
July, 1920	225	705,643	856,798	1,109,079	702,951	$842,312.05	886,814
August, 1920	266	782,415	951,345	1,208,471	770,320	936,209.44	1,040,740
September, 1920	256	832,742	1,008,785	1,293,470	817,810	1,010,150.63	1,009,557
October, 1920	238	762,013	935,579	1,190,936	754,540	911,825.58	991,066
November, 1920	238	765,817	929,875	1,184,072	756,223	933,912.11	984,910
December, 1920	265	832,407	1,027,918	1,298,864	823,758	1,007,849.32	1,076,539
January, 1921	279	894,689	1,094,323	1,383,778	883,362	1,095,857.46	1,177,053
February, 1921	241	763,925	916,838	1,179,979	752,022	917,412.49	952,904
March, 1921	255	924,309	1,112,818	1,417,220	917,441	1,105,536.55	1,084,563
April, 1921	227	771,116	955,503	1,203,087	757,576	927,977.09	907,613
May, 1921	210	694,896	864,617	1,092,602	692,747	835,882.77	792,735
June, 1921	192	613,894	761,477	960,857	610,491	751,964.12	694,720
Fiscal year, 1921	2,892	9,343,866	11,415,876	14,522,415	9,239,241	11,276,889.61	11,599,214
Fiscal year, 1920	2,478	7,089,230	8,546,044	11,059,819	7,037,875	8,513,933.15	9,374,499
Fiscal year, 1919	2,028	5,193,812	6,145,094	7,876,603		6,172,828.59	6,946,540
Fiscal year, 1918	2,068	5,440,114	6,584,073	9,371,339		6,438,855.55	7,533,031
Fiscal year, 1917	1,806		5,817,607	8,530,821		5,631,781.66	7,083,045
[1]Fiscal year, 1916	760		2,385,284	3,596,529		2,399,830.42	3,063,371
[2]Fiscal year, 1915	1,072		3,772,167	5,416,787		4,343,383.69	4,926,145

[1] Canal was closed to traffic from September 18, 1915, to April 15, 1916.
[2] Canal was opened to commercial traffic August 15, 1914.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone,," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended July 16:

Steamship *Western Knight*, line up and adjust main engine; repair crosshead slipper; *Katrina Luckenbach*, open up main turbines for inspection and repair as necessary; French cruiser *Jules Michelet*, dock; repair hull where damaged; repair hull zincs; repair sea valves; repair propellers and shafts; connect ship to salt water line; manufacture adapters for fire hose; steamship *Panama*, reboilering and general overhaul; tug *Cocoli*, manufacture 3 eccentric rods for generators, and electric weld back end of boilers; steamship *Potosi*, open up and repair throttle; motor schooner *Laura C. Hall*, muffler repairs; launch *P–1*, rebuilding of hull; dredge *Gamboa*, dock, stage, clean and paint bottom; open up, clean, grind in, and repack sea valves; install new bottom castings, port and starboard spud wells; renew bad order plates in wake of castings, and repair or renew spud well liners.

PREVIOUSLY REPORTED.

Steamships *Guardian*, docking and miscellaneous repairs; *Liberty Land*, miscellaneous engineer's department repairs; supply boat *No. 2*, general repairs and docking; steamship *Paita*, perform miscellaneous wood and pipe work and repair condenser and anchor windlass; scale boilers; tug *Cocoli*, install new engine; steamship *Maricopa*, miscellaneous repairs to boilers, engines, and auxiliary machinery; and docking, cleaning, and painting; launch *Taboga*, general overhaul of hull; U. S. submarines *R–24*, miscellaneous repairs, welding armature cores on main motors to spiders, and stiffening motor frames and foundations; *R–26*, general repairs and docking.

The following vessels were at the Cristobal shops for repairs during the week ended July 18:

Steamships *Cristobal*, *Allianca*, *General W. C. Gorgas*, *and General O. H. Ernst*, miscellaneous repairs and painting to engine, deck, and steward departments; *Cauca*, dock and undock; clean and paint bottom; pack stern gland; clean sea inlets; weld pinhole in tank top; get crane at 3 p. m. to lift 30 fathoms of chain to dock; fit new checks on port boiler; *Solana*, supply two 6-inch cast-iron low-pressure gate valves; supply two 6-inch cast-iron low-pressure elbows; supply four 6-inch low-pressure screw pipe flanges; supply two lengths of 6-inch low-pressure pipe 16 feet long and threaded on each end to fit the above-mentioned 6-inch flanges; all flanges, elbows, and valves to have 6 holes drilled; supply 48 bolts and nuts to make joints for same; *San Jose*, rebrick and repair baker's drum; make 2 sheet bronze diaphrams for reducing valve in auxiliary steam line; overhaul and put reducing valve in working order; make 3 turns white metal packing for L. P. piston rod main engines; supply machinists and helpers to work in engine department as directed; *West Kedron*, manufacture, fit, and install H. P. piston rod gland; line up piston rod guide and assemble pump, main air pump; *Acajutla*, manufacture one brass attached bilge pump valve chest; *Caribbean*, renew staybolts, nuts, and washers in both port boilers, machinist to repair bilge pump discharge valve and overhaul valve gear forward dynamo; U. S. submarine *O–11*, electric weld headers, U. S. Navy coal barges, make bridles for barges; steamships *Hector*, *Point Bonita*, *Santa Marta*, *Heredia*, and *Metapan*, and launches *Cruces*, *Nard*, and *Mary B*, minor repairs.

PREVIOUSLY REPORTED.

U. S. S. *Sciota*, calk 6 leaky rivets in frame No. 2 at 12-foot water line and miscellaneous engine repairs; motor ship *Satoe*, general overhauling, including dry-docking; barge *No. 117*, renewing plates, etc.; steamship *Vera Cruz*, miscellaneous repairs to main engines; U. S. S. *Forse*, miscellaneous repairs, including dry-docking; barge *No. 19*, renewing plates, etc.; U. S. submarine *R–25*, renew defective rivets in engine foundation and general repairs.

Transportation on Fort Randolph Branch Trains.

Conductors on Fort Randolph passenger trains have called the attention of this office to the fact that occasionally passengers question the right of conductors in refusing to accept certain forms of transportation between 3d Street, Colon, and Cristobal commissary, and between tower "B" and Cristobal commissary.

This is to advise that a cash fare rate of 5 cents has been in effect for some time between the above-named points, the same being paid

to the conductor or collector on the train, who issues cash fare receipt to the passenger. There are no tickets on sale for travel between these points, nor will mileage book or any form of pass be accepted.

Children at Sewer Openings.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 9, 1921.

All concerned—The attention of parents is invited to the extreme danger of permitting children to play in the immediate vicinity of sewers. Gratings have been placed over all sewer openings, but it is impossible to entirely eliminate the dangerous features in open storm drains, as during heavy storms the rush of water is so great that should a child fall or jump in the drain he would probably be knocked unconscious or killed by striking against the gratings covering the openings. The cooperation of all parents is requested to prevent further lamentable accidents.

JAY J. MORROW,
Governor.

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings, or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
James Alexander Maynard	36918	Barbados	La Boca	The Panama Canal	July 1, 1921.
Eugenio Real, *alias* Leal	57725	Panama	Camp Bierd	Panama Railroad Co.	June 29, 1921.

Official Circulars.

Acting Chief, Police and Fire Division.

THE PANAMA CANAL,
POLICE AND FIRE DIVISION,
BALBOA HEIGHTS, C. Z., July 11, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

Effective July 12, 1921, and during the absence on leave of Mr. Guy Johannes, Police Inspector Arthur W. Kennedy will act as Chief of the Police and Fire Division.

C. A. McILVAINE,
Executive Secretary.

Approved:
JAY J. MORROW, *Governor.*

Reserves for Repairs.

THE PANAMA CANAL,
ACCOUNTING DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 1, 1921.

CIRCULAR No. 308:

Circular to all concerned—Reserves for repairs were originated with the intention of writing into monthly operations certain amounts on each piece of equipment in use to build up a reserve for periodic extraordinary repairs and overhauling to avoid charging such heavy repair costs to the jobs on which the equipment happens to be working at the time heavy repairs are necessary. It was intended that small running repairs be charged to current operation.

However, the practice has grown up of charging to the reserve accounts all repairs, large and small, including those made by the Mechanical Division as well as those made by the divisions themselves. This practice should be discontinued and only extraordinary repairs and overhauling charged to the reserves, and that limited as much as possible to repairs made by the Mechanical Division.

Up to this time the reserve charges have been made by the Accounting Department against the divisions using the equipment, and actual repair costs have been charged to the reserve accounts direct. Effective July 1, 1921, the actual repairs made by one division for another division will be charged to the division for whom the repairs are made, and the latter division will make the debit to the reserve accounts.

In making the allotments, in order to balance the charges between divisions, it has been necessary to allot to the Mechanical Division as a credit the estimated amount of repairs to be made for the various divisions, and to allot a corresponding amount to the other divisions under the heading of "Repairs to Equipment—Mechanical Division," without reference to the charges for reserve for repairs, taking for granted that the actual repair costs will about equal the reserve charges in the course of a year.

Beginning with July both actual repairs and charges for reserves will be shown on the debit side of the detail allotment statements in the spaces provided for that purpose, and on the credit side of the allotment statements will be shown the amount charged to the reserve accounts covering actual repairs, whether those repairs were made by the Mechanical Division, by the division itself, or by some other division.

H. A. A. SMITH,
Auditor, The Panama Canal.

Approved:
JAY J. MORROW, *Governor.*

Directory of The Panama Canal.

Executive Department.

Headquarters, Balboa Heights.

COL. JAY J. MORROW, U. S. A., Governor.
M. B. Stevens, Secretary.
C. A. MCILVAINE, Executive Secretary.
JNO. H. SMITH, Chief Clerk, Executive Office.
GUY JOHANNES, Chief, Police and Fire Division.
C. H. CALHOUN, Chief, Division of Civil Affairs.
A. R. LANG, Superintendent, Division of Schools.
T. S. BOOZ, General Secretary, Bureau of Clubs and Playgrounds.
A. C. HINDMAN, District Attorney, Ancon.
W. F. VAN DAME, Land Agent, Ancon.

Department of Operation and Maintenance.

(Under immediate direction of the Governor as head of the department.)
Headquarters, Balboa Heights.

COL. M. L. WALKER, U. S. A., Engineer of Maintenance.
MAJ. C. S. RIDLEY, U. S. A., Assistant Engineer of Maintenance.
W. L. HERSH, Electrical Engineer, Electrical Division.
W. R. HOLLOWAY, Superintendent, Pacific Locks, Pedro Miguel.
E. D. STILLWELL, Superintendent, Gatun Locks, Gatun.
J. J. WALSH, General Foreman, Gatun Dam, Gatun.
C. J. EMBREE, Office Engineer.
O. E. MALSBURY, Assistant Engineer, Section of Surveys.
R. Z. KIRKPATRICK, Chief Hydrographer, Section of Meteorology and Hydrography.
G. W. GREEN, Municipal Engineer, Division of Municipal Engineering.
J. M. PRATT, Superintendent, Dredging Division, Paraiso.
J. G. CLAYBOURN, Assistant Engineer, Dredging Division, Paraiso.
CAPT. E. P. JESSOP, U. S. N., Marine Superintendent, Marine Division.
COMDR. F. V. MCNAIR, U. S. N., Captain of the Port, Cristobal.
LIEUT. COMDR. S. L. HENDERSON, U. S. N., Captain of the Port, Balboa.
Board of Local Inspectors—COMDR. F. V. MCNAIR, U. S. N., *Chairman*,
LIEUT. COMDR. S. L. HENDERSON, U. S. N., and LIEUT. HARRY CHAMPENO, U. S. N.
John J. Walker, Recorder.
W. I. PENDER, Inspector of Hulls and Boilers.
F. KARIGER, Pilot in Charge, Lighthouse Subdivision, Gatun.
COMDR. E. G. KINTNER, Naval Constructor, U. S. N., Superintendent of Mechanical Division, Balboa.
H. H. EVANS, Assistant Superintendent, Mechanical Division, Balboa.
G. S. TOWER, Mechanical Engineer, Mechanical Division, Balboa.
W. H. STONE, Production Superintendent, Cristobal Shops, Cristobal.

Supply Department.

Headquarters, Balboa Heights.

R. K. MORRIS, Chief Quartermaster.
ROY R. WATSON, Superintendent.
J. J. JACKSON, General Manager, Commissary Division, Cristobal. (P. R. R.)
J. B. FIELDS, Constructing Quartermaster.
M. D. SMITH, General Storekeeper, Balboa.
J. H. K. HUMPHREY, Superintendent, Cattle Industry, Cristobal. (P. R. R.)
B. C. POOLE, District Quartermaster, Ancon-Balboa, Balboa Heights.
J. M. KING, District Quartermaster, Cristobal-Gatun, Cristobal.
C. PETERS, District Quartermaster, Pedro Miguel.
A. P. E. DOYLE, Printer, The Panama Canal Press, Mount Hope.

Accounting Department.

Headquarters, Balboa Heights.

H. A. A. SMITH, Auditor.
ELWYN GREENE, Assistant Auditor on the Isthmus.
R. W. GLAW, Paymaster.
A. H. MOHR, Collector.

Health Department.

Headquarters, Balboa Heights.

Col. H. C. Fisher, U. S. A., Chief Health Officer.
Dr. D. P. Curry, Assistant Chief Health Officer.
Surg. W. C. Rucker, U. S. P. H. S., Chief Quarantine Officer.
Col. L. T. Hess, U. S. A., Superintendent, Ancon Hospital, Ancon.
Maj. T. J. Leary, U. S. A., Superintendent, Colon Hospital, Cristobal.
Dr. Louis Wender, Superintendent, Corozal Hospital, Corozal.
Maj. E. A. Bocock, Superintendent, Santo Tomas Hospital (Panama), Ancon.
Dr. Henry Goldthwaite, Health Officer of Panama, Ancon.
Dr. J. L. Byrd, Health Officer of Cristobal-Colon, Cristobal.
Dr. C. A. Hearne, Quarantine Officer, Cristobal.
Dr. J. D. H. Odom, Quarantine Officer, Balboa.

Courts.

Charles Kerr, District Judge, Ancon.
Miguel A. Otero, Marshal, Ancon.
E. M. Goolsby, Clerk, Ancon.
J. S. Campbell, Assistant Clerk, Cristobal.
J. W. Blackburn, Magistrate, Balboa.
R. A. Wade, Magistrate, Cristobal.

Wage and Complaints Board.

Balboa Heights.

Wage Board:
Maj. C. S. Ridley, representing The Panama Canal.
W. C. Hushing, representing employees.

Board on Complaints Concerning Working Conditions:
Maj. C. S. Ridley, and Head of Department or Division interested, representing The Panama Canal.
W. C. Hushing, and Harvey McConaughey, representing employees.

The Panama Canal in the United States.

Headquarters, Old Land Office Building, 7th and "E" Streets NW., Washington, D. C.

A. L. Flint, General Purchasing Officer and Chief of Office.
Ray L. Smith, Assistant to the Chief of Office.
E. D. Anderson, Chief Clerk, Purchasing Department.
B. F. Harrah, Assistant Auditor.
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A. S. Perry, Assistant Purchasing Agent, New Orleans, La.
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CANAL WORK IN JUNE.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of June, 1921:

BALBOA HEIGHTS, C. Z., July 18, 1921.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report of The Panama Canal for the month of June, 1921.

CANAL TRAFFIC.

The total number of vessels and craft of all kinds through the Canal as compared with the preceding month, and with the corresponding month of last year, was as follows:

	June, 1921.	May, 1921.	June, 1920.
Commercial vessels	193	210	201
United States Government vessels	33	30	11
Launches (under 10 tons)	3	6	6
Total vessels and craft through Canal	229	246	218

COMMERCIAL TRAFFIC.[1]

A comparison of this month's commercial traffic with that of the preceding month, of the corresponding month of 1920, and of the average month's traffic for the past 12 months, shows the following:

Panama Canal net tonnage:	
June, 1921	761,477
May, 1921	864,617
June, 1920	704,712
Average month for the past year	951,323
Registered gross tonnage:	
June, 1921	960,857
May, 1921	1,092,602
June, 1920	921,005
Average month for the past year	1,210,201
Registered net tonnage:	
June, 1921	610,491
May, 1921	692,747
June, 1920	575,027
Average month for the past year	769,937
United States equivalent tonnage:	
June, 1921	613,894
May, 1921	694,896
June, 1920	583,685
Average month for the past year	778,656
Tolls earned:	
June, 1921	$751,964.12
May, 1921	835,882.77
June, 1920	711,159.19
Average month for the past year	939,740.80
Tons of cargo carried:	
June, 1921	694,720
May, 1921	792,735
June, 1920	834,421
Average month for the past year	966,601

Ocean-going commercial vessels passing through the Canal averaged 6.4 ships per day. The average tonnage, tolls, and tons of cargo carried, per commercial vessel, as compared with last month's traffic, were as follows:

[1] Commercial traffic includes all vessels of 10 tons or more transiting the Canal, with the exception of vessels owned by the United States Government, or chartered by the Government to carry Government supplies.

Average per vessel.	This month.	Last month.
United States equivalent net tonnage	3,197	3,309
Panama Canal net tonnage	3,965	4,117
Registered gross tonnage	5,004	5,203
Registered net tonnage	3,180	3,299
Tolls	$3,703.95	$3,980.39
Tons of cargo (all vessels)	3,618	3,775
Tons of cargo (laden vessels only)	3,970	4,086

TOLLS PAID PER CARGO TON BY NATIONALITY OF VESSELS.

The average rate of tolls paid on each ton (2,240 pounds) of cargo passing through the Canal from the Atlantic to the Pacific was $1.11 per ton, and from the Pacific to the Atlantic $0.93 per ton, with a general average of $1.02 per ton. The average rate paid per cargo ton, by nationality of vessels, is shown in the following statement:

	Atlantic to Pacific.	Pacific to Atlantic.	General average.
British	$1.06	$1.23	$1.15
Chilean	4.80	12.13	6.29
Danish	1.20	.73	.86
Dutch	3.71	.58	1.15
Finnish	.....	.75	.75
French	2.62	.....	2.62
German	.....	.55	.55
Italian	4.61	.....	4.61
Japanese	1.16	1.70	1.30
Mexican	.65	.....	.65
Norwegian	.97	.56	.80
Peruvian	3.15	1.27	1.81
Swedish	1.47	.54	.67
United States	1.01	.81	.93
Average rate all ships, June, 1921	1.11	.93	1.02
Average rate all ships, May, 1921	1.06	.89	.97
Average rate all ships, April, 1921	.94	.92	.93

The difference in the rate of tolls paid per cargo ton, by vessels of various nationalities, is due to some vessels being but lightly loaded while others are carrying capacity cargoes. This also accounts for the variation in the rates per cargo ton as between northbound and southbound cargo for ships of the same nationality.

In the computation of the rate of tolls paid per cargo ton, as shown above, only the tolls paid on laden cargo vessels have been considered.

The lowest rate of tolls paid per cargo ton by any vessel passing through the Canal during the month was paid by the steamship *Steel Worker*, American registry, bound from New York to San Diego, and carrying 8,929 tons of steel and general cargo, on which tolls of $4,312.50 were assessed, or a rate of 48 cents per cargo ton.

COMMODITY STATISTICS.

A classification of all cargo passing through the Canal, by commodities, giving the origin and destination of the same, has been previously compiled and was published in THE PANAMA CANAL RECORD under date of July 20, 1921. A brief summary of the principal items of cargo passing through the Canal is shown herewith:

CARGO PASSING FROM ATLANTIC TO PACIFIC.

Commodity.	Cargo tons.	Per cent of total cargo. This month	Per cent of total cargo. Last month
Oils:			
Crude	98,099	35.7	35.4
Refined	30,598		
Manufactured goods:			
Iron and steel	60,923	20.7	20.4
Machinery	7,030		
Other	6,568		
Coal and coke	15,455	4.3	6.8
Sulphur	11,700	3.3	2.7
Cotton, raw	11,997	3.3	2.4
Cement	5,394	1.5	0.8
Other and general cargo	111,821	31.1	31.5
Total cargo	359,585		

CARGO PASSING FROM PACIFIC TO ATLANTIC.

Commodity.	Cargo tons.	Per cent of total cargo. This month	Last month
Nitrate	58,801	17.6	10.6
Wheat	58,261	17.5	22.3
Lumber	31,402	9.4	10.1
Cold storage and food products	34,625	10.3	8.3
Barley	18,932	5.7	1.8
Coffee	11,084	3.3	2.3
Metals (copper, 9,520 tons)	10,969	3.3	2.7
Canned goods	10,662	3.2	2.5
Sugar	10,821	3.2	10.1
Ores	8,530	2.6	2.7
Oil, lubricating	7,248	2.2	.....
Rice	6,436	1.9	1.2
Flour	5,217	1.6	6.6
Wool	4,623	1.4	3.7
Fruit, fresh and dried	4,246	1.3	2.0
Cacao	3,889	1.2	1.0
Beans and peas	3,519	1.1	0.8
Ivory nuts	2,932	0.8	0.2
Other and general	42,939	12.6	14.7
Total cargo	335,136		

UNITED STATES COASTWISE TRAFFIC.

The number of vessels engaged in the United States coastwise traffic, passing through the Canal, together with their tonnage, tolls, and tons of cargo carried, as compared with the preceding months of the calendar year were as follows:

	Atlantic to Pacific.				Pacific to Atlantic.			
	No. of ships.	P. C. net tonnage.	Tolls.	Tons of cargo.	No. of ships.	P. C. net tonnage.	Tolls.	Tons of cargo.
1921.								
January	17	88,086	$91,390.00	76,593	16	62,765	$64,343.59	81,336
February	15	89,940	79,169.20	67,302	17	66,043	66,703.70	68,345
March	16	71,770	75,338.65	55,111	11	61,804	64,470.64	52,289
April	19	92,033	94,185.00	94,484	14	68,368	65,523.74	59,306
May	19	82,257	84,545.85	90,617	16	75,593	72,813.55	93,242
June	17	96,199	94,577.11	68,809	11	53,986	53,953.75	57,234

UNITED STATES SHIPPING BOARD VESSELS.

The number of vessels under control of the United States Shipping Board passing through the Canal, together with their Panama Canal net tonnage, tolls, and tons of cargo carried, as compared with preceding months of the calendar year, was as follows:

	Atlantic to Pacific.				Pacific to Atlantic.			
	No. c ships	P. C. net tonnage.	Tolls.	Tons of cargo.	No. of ships.	P. C. net tonnage.	Tolls.	Tons of cargo.
1921.								
January	14	59,738	$64,769.85	70,058	23	96,877	$93,268.29	98,075
February	8	41,024	42,951.75	35,018	20	96,441	94,082.01	108,285
March	18	94,823	96,782.80	83,978	8	34,066	31,378.00	30,025
April	13	61,176	61,590.00	60,231	12	56,049	53,162.18	52,908
May	9	39,614	40,180.00	48,489	21	97,257	92,380.47	114,107
June	17	86,361	78,770.14	65,945	11	49,370	48,080.00	59,696

TRAFFIC BY TRADE ROUTES.

Statements attached to this report show the origin and destination of all cargo passing through the Canal as accurately as the same can be segregated from the cargo declarations submitted by the ships' masters (*see* pages 790 and 791). On page 776 is given a summary of the traffic passing over the principal trade routes, showing the number of vessels, their Panama Canal net measurement, and the amount of cargo carried. The vessels shown as in ballast represent cargo-carrying ships only; warships, tugs, yachts, etc., not being included as "ballast."

Trade routes.	Total vessels.			Vessels in ballast.	
	Number.	Panama Canal net tonnage.	Cargo.	Number.	Panama Canal net tonnage.
Atlantic to Pacific.					
United States coastwise	17	96,199	68,809	1	10,498
United States to Far East	15	78,774	88,567	.....	.....
Cristobal to west coast of South America	15	25,929	3,818	4	3,707
East coast of United States to west coast of South America	10	31,436	25,545	.....	.....
Europe to west coast of South America	8	33,678	15,985	.....	.....
East coast of United States to Australasia	5	31,884	33,538	.....	.....
Europe to west coast of United States	5	26,138	15,545	.....	.....
East coast of Mexico to west coast of South America	3	14,704	27,712	.....	.....
Europe to Australasia	2	14,414	4,418	.....	.....
East coast of Mexico to west coast of United States	2	12,192	20,000	.....	.....
Canadian coastwise	2	7,040	9,536	.....	.....
East coast of United States to west coast of Canada	2	3,655	6,800	.....	.....
East coast of United States to west coast of Central America	2	2,165	2,470	.....	.....
East coast of United States to west coast of Mexico	2	2,394	3,785	.....	.....
East coast of South America to west coast of United States	2	2,036	318	1	1,120
Cristobal to west coast of Central America	2	1,398	1,150	.....	.....
East coast of United States to Balboa, C. Z.	1	4,299	7,183	.....	.....
Cristobal, C. Z., to west coast of United States	1	1,593	1,675	.....	.....
Miscellaneous trade routes	7	25,374	22,730	1	2,853
Totals, Atlantic to Pacific, June, 1921	103	415,302	359,584	7	18,178
Totals, Atlantic to Pacific, May, 1921	100	414,429	381,323	6	13,840
Totals, Atlantic to Pacific, June, 1920	102	358,387	424,750	7	15,662
Pacific to Atlantic.					
West coast of South America to east coast of United States	14	51,040	56,081	3	7,299
West coast of South America to Cristobal	14	21,872	8,921	.....	.....
West coast of United States to Europe	12	56,768	89,641	.....	.....
United States coastwise	11	53,986	57,234	.....	.....
West coast of South America to Europe	9	27,603	37,491	.....	.....
Australasia to Europe	10	70,456	40,130	.....	.....
Far East to east coast of United States	4	18,420	17,584	.....	.....
Central America to Cristobal	3	2,647	2,348	.....	.....
West coast of South America to east coast of Mexico	2	10,132	.....	2	10,132
West coast of Canada to east coast of United States	2	7,902	12,380	.....	.....
West coast of United States to Cristobal, C. Z.	1	1,593	1,579	.....	.....
Miscellaneous trade routes	7	23,756	11,747	3	12,491
Totals, Pacific to Atlantic, June, 1921	89	346,175	335,136	8	29,922
Totals, Pacific to Atlantic, May, 1921	110	450,188	411,412	15	75,419
Totals, Pacific to Atlantic, June, 1920	99	346,325	409,671	13	42,130

LATIN-AMERICAN TRAFFIC.

The number of vessels, tonnage, and tons of cargo carried by vessels engaged in the Latin-American traffic, classified by nationality, were as follows:

ATLANTIC TO PACIFIC.

Nationality.	No. of vessels.	TONNAGE.				Tolls.	Cargo.
		United States equivalent.	Panama Canal net.	Registered gross.	Registered net.		
United States	22	55,595	65,002	85,290	53,796	$66,434.88	76,516
British	13	18,436	24,861	32,415	19,327	22,992.13	23,303
Norwegian	5	12,092	14,560	16,749	10,633	14,389.45	13,843
Chilean	3	5,071	8,827	10,165	6,160	6,338.75	1,320
Peruvian	3	3,708	7,750	12,325	6,031	4,635.00	1,472
French	2	6,523	6,465	8,201	5,209	7,758.00	2,956
Danish	1	4,228	5,303	6,636	4,222	5,285.00	3,500
Japanese	1	3,645	4,289	5,790	3,564	4,556.25	2,380
Swedish	1	3,430	5,533	5,554	4,225	4,287.50	2,901
Italian	1	2,718	3,773	4,680	2,850	3,397.50	736
Dutch	1	1,598	3,083	2,652	1,619	1,997.50	1,046
June, 1921	53	117,044	149,446	190,457	117,636	142,071.96	129,973
May, 1921	44	111,120	141,244	188,846	114,821	137,893.60	135,262
June, 1920	54	.....	151,685	203,481	125,927	.....	160,086

PACIFIC TO ATLANTIC.

Nationality.	No. of vessels	TONNAGE. United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
United States	17	36,303	44,716	59,997	36,632	$41,522.09	45,578
British	16	34,140	44,140	57,170	34,694	39,254.95	29,425
Norwegian	2	7,669	9,164	12,109	7,586	7,694.71	8,000
Peruvian	3	3,708	7,750	12,325	6,031	4,635.00	3,663
Dutch	2	3,617	6,243	5,881	3,618	4,521.25	7,060
Chilean	2	3,260	5,645	6,367	3,888	4,075.00	336
German	2	2,343	2,681	3,992	2,318	2,928.75	5,310
Japanese	1	3,368	4,598	5,446	3,311	4,210.00	3,500
Danish	1	3,127	4,090	4,950	3,163	3,908.75	6,340
Finnish	1	2,262	2,256	2,405	2,291	2,707.20	3,611
French	1	2,155	2,096	2,953	1,880	1,616.25	.....
June, 1921	48	101,952	133,379	173,595	105,412	117,073.95	112,823
May, 1921	57	146,917	182,164	238,836	150,240	157,245.85	116,236
June, 1920	59	.....	183,738	245,076	148,574	.....	198,080

CLASSIFICATION OF COMMERCIAL TRAFFIC.[1]

A statement of this month's commercial traffic, classified (1) according to the nationality of the various ships passing through the Panama Canal, and (2) segregating laden and unladen vessels, is shown in the following tabulations:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Number and nationality of commercial vessels passing through the Panama Canal:			
British	26	32	58
Chilean	3	2	5
Danish	2	3	5
Dutch	3	3	6
Finnish	.....	1	1
French	2	1	3
German	.....	2	2
Italian	1	.....	1
Japanese	6	3	9
Mexican	2	.....	2
Norwegian	7	3	10
Peruvian	3	3	6
Swedish	1	2	3
United States	47	34	81
Totals, June, 1921	103	89	192
Totals, May, 1921	100	110	210
Totals, June, 1920	102	99	201
United States equivalent net tonnage of commercial vessels passing through the Panama Canal, by nationality:			
British	77,350	111,211	188,561
Chilean	5,071	3,260	8,331
Danish	7,044	10,938	17,982
Dutch	11,321	8,001	19,322
Finnish	.....	2,262	2,262
French	6,523	2,155	8,678
German	.....	2,343	2,343
Italian	2,718	.....	2,718
Japanese	23,807	12,206	36,013
Mexican	1,964	.....	1,964
Norwegian	19,430	10,722	30,152
Peruvian	3,708	3,708	7,416
Swedish	3,430	7,769	11,199
United States	174,149	102,804	276,953
Totals, June, 1921	336,515	277,379	613,894
Totals, May, 1921	334,894	360,002	694,896
Totals, June, 1920	300,045	283,640	583,685

[1] Commercial traffic includes all ocean-going vessels transiting the Canal, excepting vessels owned or chartered by the United States Government.

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Panama Canal net tonnage of commercial vessels passing through the Panama Canal, by nationality:			
British	91,444	134,998	226,442
Chilean	8,827	5,645	14,472
Danish	8,779	12,724	21,503
Dutch	15,217	13,050	28,267
Finnish	.....	2,256	2,256
French	6,465	2,096	8,561
German	.....	2,681	2,681
Italian	3,773	.....	3,773
Japanese	27,161	14,349	41,510
Mexican	2,394	.....	2,394
Norwegian	23,040	13,050	36,090
Peruvian	7,750	7,750	15,500
Swedish	5,533	10,934	16,467
United States	214,919	126,642	341,561
Totals, June, 1921	415,302	346,175	761,477
Totals, May, 1921	414,429	450,188	864,617
Totals, June, 1920	358,387	346,325	704,712
Registered gross tonnage of commercial vessels passing through the Panama Canal, by nationality:			
British	117,833	173,492	291,325
Chilean	10,165	6,367	16,532
Danish	11,031	16,142	27,173
Dutch	17,958	12,825	30,783
Finnish	.....	2,405	2,405
French	8,201	2,953	11,154
German	.....	3,992	3,992
Italian	4,680	.....	4,680
Japanese	35,433	18,473	53,906
Mexican	3,325	.....	3,325
Norwegian	27,317	17,003	44,320
Peruvian	12,325	12,325	24,650
Swedish	5,554	12,564	18,118
United States	267,062	161,432	428,494
Totals, June, 1921	520,884	439,973	960,857
Totals, May, 1921	529,408	563,194	1,092,602
Totals, June, 1920	464,877	456,128	921,005
Registered net tonnage of commercial vessels passing through the Panama Canal, by nationality:			
British	75,362	107,558	182,920
Chilean	6,160	3,888	10,048
Danish	7,017	11,085	18,102
Dutch	11,214	8,032	19,246
Finnish	.....	2,291	2,291
French	5,209	1,880	7,089
German	.....	2,318	2,318
Italian	2,850	.....	2,850
Japanese	23,072	11,961	35,033
Mexican	1,894	.....	1,894
Norwegian	17,344	10,640	27,984
Peruvian	6,031	6,031	12,062
Swedish	4,225	9,913	14,138
United States	171,042	103,474	274,516
Totals, June, 1921	331,420	279,071	610,491
Totals, May, 1921	334,322	358,425	692,747
Totals, June, 1920	294,261	280,766	575,027
Tolls levied against commercial vessels passing through the Panama Canal by nationality:			
British	$95,888.68	$134,977.00	$230,865.68
Chilean	6,338.75	4,075.00	10,413.75
Danish	8,805.00	13,595.35	22,310.35
Dutch	14,151.25	10,001.25	24,152.50
Finnish	.....	2,707.20	2,707.20
French	7,758.00	1,616.25	9,374.25
German	.....	2,928.75	2,928.75
Italian	3,397.50	.....	3,397.50
Japanese	29,422.55	15,104.70	44,527.25
Mexican	2,455.00	.....	2,455.00
Norwegian	22,154.45	11,510.96	33,665.41
Peruvian	4,635.00	4,635.00	9,270.00

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Tolls levied against commercial vessels passing through the Panama Canal by nationality—Continued:			
Swedish	$4,287.50	$9,711.25	$13,998.75
United States	211,535.64	124,648.34	336,183.98
	[1]5,713.75	.....	[1]5,713.75
Totals, June, 1921	416,543.07	335,421.05	751,964.12
Totals, May, 1921	412,934.09	422,948.68	835,882.77
Totals, June, 1920	370,188.37	340,970.82	711,159.19
Tons of cargo carried by commercial vessels passing through the Panama Canal, by nationality:			
British	90,752	103,655	194,407
Chilean	1,320	336	1,656
Danish	7,350	18,512	25,862
Dutch	3,812	17,150	20,962
Finnish	.....	3,611	3,611
French	2,956	.....	2,956
German	.....	5,310	5,310
Italian	736	.....	736
Japanese	25,468	8,874	34,342
Mexican	3,785	.....	3,785
Norwegian	19,849	14,017	33,866
Peruvian	1,472	3,663	5,135
Swedish	2,901	17,956	20,857
United States	199,183	142,052	341,235
Totals, June, 1921	359,584	335,136	694,720
Totals, May, 1921	381,323	411,412	792,735
Totals, June, 1920	424,750	409,671	834,421
A further classification of the above commercial traffic:			
Cargo-carrying vessels—			
Laden	96	79	175
Ballast	7	8	15
Yacht	.....	1	1
Cable repair ship	.....	1	1
Total commercial vessels	103	89	192
Net tonnage of above, Panama Canal measurement:			
Cargo-carrying vessels—			
Laden	397,124	314,983	712,107
Ballast	18,178	29,922	48,100
Yacht	.....	320	320
Cable repair ship	.....	950	950
Total Panama Canal net tonnage	415,302	346,175	761,477
Tolls paid on above ships:			
Cargo-carrying vessels—			
Laden	$403,389.75	$312,272.65	$715,662.40
Ballast	13,153.32	21,661.15	34,814.47
Yacht	.....	347.25	347.25
Cable repair ship	.....	1,140.00	1,140.00
Total tolls paid	416,543.07	335,421.05	751,964.12
Motor ships through the Canal	8	6	14
Panama Canal net tonnage of above	19,877	22,995	42,872
Sailing vessels through the Canal	1	2	3
Panama Canal net tonnage of above	1,218	2,812	4,030
Cargo carried by commercial vessels	359,584	335,136	694,720
Average rate of tolls per cargo ton [2]	$1.14	$1.00	$1.07
Average rate of tolls per cargo ton [3]	1.11	.93	1.02

CLASSIFICATION OF NONCOMMERCIAL TRAFFIC.[4]

The following statement shows the tonnage of, and amount of cargo carried by United States Government vessels passing through the Canal during the month of

[1] United States vessel passing through the Panama Canal in March, 1921, on which back tolls were collected.
[2] Including cargo-carrying ships in ballast.
[3] Laden vessels only.
[4] Vessels, barges, tugs, launches, etc., in the service of The Panama Canal are not included in this statement of traffic.

June, 1921. The traffic passes through the Canal free of tolls; if tolls had been assessed against these vessels at commercial rates, the amounts collected would have been as indicated below.

In this statement is also included the number and tonnage of launches transiting the Canal, together with tolls collected thereon. Although paying tolls they are included in the noncommercial traffic, being small nonseagoing vessels under 10 tons measurement.

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
United States Navy vessels:			
Tug	.....	1	1
Battleship	1	.....	1
Submarines	9	6	15
Submarine tender	1	.....	1
Cargo ship	1	.....	1
Colliers	1	1	2
Submarine chasers	1	1	2
Ammunition ship	.....	1	1
Total ships	14	10	24
United States Army vessels:			
Mine planter	1	.....	1
Launches	4	.....	4
Total Army vessels	5	.....	5
Vessels chartered to carry Government supplies	4	.....	4
Total vessels through Canal free of tolls	23	10	33
Tonnage of above vessels:			
Displacement tonnage—			
Naval vessels	44,607	14,587	59,194
Army vessels	124	.....	124
Total displacement tonnage	44,731	14,587	59,318
Panama Canal net tonnage:			
Naval vessels	6,972	4,124	11,096
Vessels carrying Government supplies	14,184	.....	14,184
Army vessels	403	.....	403
Total Panama Canal net tonnage	21,559	4,124	25,683
Cargo carried by above vessels:			
Naval vessels ... tons	10,741	400	11,141
Vessels carrying Government supplies ... tons	23,447	.....	23,447
Total cargo through Canal free of tolls ... tons	34,188	400	34,588
Tolls above vessels would have paid if assessed at commercial rates:			
Naval vessels	$30,058.60	$10,262.78	$40,321.38
Army vessels	352.16	.....	352.16
Vessels with Government supplies	14,465.65	.....	14,465.65
Total	44,876.41	10,262.78	55,139.19
Launches through the Canal	2	1	3
Net tonnage of above, Panama Canal measurement	4	1	5
Tolls collected on above	$2.25	$0.75	$3.00

STATEMENT OF OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Canal are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Vessels passing through the Canal:			
Commercial	103	89	192
United States Government vessels	23	10	33
Launches (under 10 tons)	2	1	3
Total vessels and craft	128	100	228
Tonnage of above vessels:			
Panama Canal net measurement—			
Commercial vessels	415,302	346,175	761,477
United States Government vessels	21,559	4,124	25,683
Launches	4	1	5
Displacement tonnage:			
United States Government vessels	44,731	14,587	59,318

	Cristobal.	Balboa.	Total.
Cargo carried by above vessels:			
Commercial.....tons..	359,584	335,136	694,720
United States Government.....tons..	34,188	400	34,588
Total cargo through the Canal.....tons..	393,772	335,536	729,308
Deck cargo included in the above.....tons..	477	2,493	2,970
Vessels entering port but not transiting Canal:			
Number entering.....	54	4	58
Number clearing.....	58	4	62
Registered gross tonnage of above:			
Entering.....	237,034	15,488	252,522
Clearing.....	258,803	21,545	280,348
Registered net tonnage of above:			
Entering.....	143,070	10,609	153,679
Clearing.....	156,359	13,148	169,507
Vessels transiting the Canal and handling passengers or cargo at port:			
Number entering.....	48	44	92
Number clearing.....	49	43	92
Registered gross tonnage of above:			
Entering.....	219,150	157,145	376,295
Clearing.....	224,022	155,580	379,602
Registered net tonnage of above:			
Entering.....	138,055	103,011	241,066
Clearing.....	141,829	101,691	243,520
All vessels entering and clearing, including those transiting the Canal:			
Number entering.....	247	211	458
Number clearing.....	248	213	461
Registered gross tonnage of above:			
Entering.....	1,265,316	1,066,797	2,332,113
Clearing.....	1,291,383	1,054,084	2,345,467
Registered net tonnage of above:			
Entering.....	826,654	702,097	1,528,751
Clearing.....	843,789	690,285	1,534,074
Transit cargo arriving.....tons..	721,464	722,106	1,443,570
Transit cargo clearing.....tons..	725,316	710,274	1,435,590
Local cargo arriving.....tons..	30,896	12,426	43,322
Local cargo shipped.....tons..	2,599	513	3,112
Cargo received for transshipment.....tons..	25,873	174	26,047
Cargo transshipped.....tons..	31,246	11	31,257
Cargo handled by Receiving and Forwarding Agent, Panama Railroad:			
Received.....tons..	46,237	1,340	47,577
Dispatched.....tons..	35,810	531	36,341
Rehandled.....tons..	2,472	77	2,549
Stevedored.....tons..	37,223	654	37,877
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad.....	58	12	70
Panama Railroad vessels.....	3	.....	3
United States Army vessels.....	3	1	4
Total vessels supplied with bunker coal.....	64	13	77
Coal supplied to above vessels:			
Commercial, other than Panama Railroad.....tons..	17,694	3,791	21,485
Panama Railroad vessels.....tons..	980	.....	980
United States Army vessels.....tons..	89	33	122
Total coal supplied to vessels.....tons..	18,763	3,824	22,587
Coal issues, miscellaneous:			
Panama Canal departments.....tons..	791	482	1,273
Panama Railroad departments.....tons..	727	.....	727
United States Army, excepting vessels.....tons..	558	.....	558
Individuals and companies.....tons..	386	.....	386
Total coal furnished from Panama Canal deposits.....tons..	21,225	4,306	25,531
Coal on hand, July 1, 1921.....tons..	127,850	16,833	144,683
Coal on hand, June 1, 1921.....tons..	140,553	21,139	161,692
Coal received during June, 1921.....tons..	8,522	.....	8,522

	Cristobal.	Balboa.	Total.
United States Navy coal account.			
Issued to United States Navy, including vessels ... tons..	1,282	1,851	3,133
Coal on hand, July 1, 1921 ... tons..	63,052	15,469	78,521
Coal on hand, June 1, 1921 ... tons..	64,334	17,320	81,654
Vessel supplied with fuel oil from Panama Canal tanks ...	1	.....	1
Fuel oil supplied to above vessel ... bbls..	491	.....	491
Fuel oil issues, miscellaneous:			
To Panama Canal departments ... bbls..	7,741	21,574	29,315
To Panama Railroad ... bbls..	622	.....	622
To Army and Navy ... bbls..	204	441	645
Total issues from Panama Canal tanks ... bbls..	9,058	22,015	31,073
Fuel oil on hand, July 1, 1921 ... bbls..	92,049	93,941	185,990
Fuel oil on hand, June 1, 1921 ... bbls..	97,423	86,542	183,965
Taken up on inventory ... bbls..	3,684	1,881	5,565
Received during the month ... bbls..	.....	27,533	27,533
Diesel oil issued during the month ... bbls..	19	.....	19
Dropped on inventory during the month ... bbls..	42	.....	42
Total ... bbls.	61	.....	61
Diesel oil on hand, July 1, 1921 ... bbls..	51,933	1,026	52,959
Diesel oil on hand, June 1, 1921 ... bbls..	51,994	1,026	53,020
Fuel oil pumped for individuals and companies at 4 cents per barrel bbls..	209,230	126,163	335,393
Miscellaneous transfers ... bbls..	1,889	.....	1,889
Total oil handled ... bbls..	220,196	148,178	368,374
Vessels furnished with commissary supplies:			
Commercial, other than Panama Railroad ...	119	69	188
Panama Railroad ...	7	.....	7
United States Government ...	14	20	34
Total vessels furnished supplies ...	140	89	229
Commissary sales to commercial vessels:			
Ice ...	$3,186.33	$798.91	$3,985.24
Wholesale groceries ...	3,440.28	1,468.57	4,908.85
Cold storage ...	17,613.13	7,979.58	25,592.71
Laundry ...	4,226.30	88.94	4,315.24
Miscellaneous ...	1,017.86	1,964.30	2,982.16
Total sales to commercial vessels ...	29,483.90	12,300.30	41,784.20
Commissary sales to Panama Railroad vessels:			
Ice ...	$108.00	.....	$108.00
Wholesale groceries ...	1,402.22	.....	1,402.22
Wholesale cold storage ...	7,385.37	.....	7,385.37
Laundry ...	1,478.58	.....	1,478.58
Miscellaneous ...	471.90	.....	471.90
Total sales to Panama Railroad vessels ...	10,846.07	.....	10,846.07
Commissary sales to United States Government vessels:			
Ice ...	$159.65	$266.94	$426.59
Groceries ...	787.48	11,476.21	12,263.69
Cold storage ...	5,142.17	14,776.56	19,918.73
Laundry ...	215.80	5.15	220.95
Miscellaneous ...	435.78	582.27	1,018.05
Total sales to Government vessels ...	6,740.88	27,107.13	33,848.01
Total commissary sales to all vessels:			
June, 1921 ...	$47,070.85	$39,407.43	$86,478.28
May, 1921 ...	40,231.01	28,558.40	68,789.41
June, 1920 ...	113,159.71	36,994.87	150,154.58
Admeasurement certificates:			
United States equivalent issued or made ...	25	1	26
Measured for Panama Canal ...	17	12	29
United States equivalent or Panama Canal corrected ...	22	4	26
Services of harbor equipment:			
Tugs, total operating hours ...	468	287	755
Launches, total operating hours ...	1,290	1,206	2,496
Vessels repaired at Panama Canal shops:			
Commercial—			
Steamships ...	39	11	50
Motor ships ...	1	1	2
Battleship ...	.....	1	1

	Cristobal.	Balboa.	Total.
Vessels repaired at Panama Canal shops—Continued:			
United States Government—			
Cruiser	.....	1	1
Submarines	3	2	5
Submarine chaser	.....	1	1
Transport	1	.....	1
Mine planter	1	.....	1
Survey ship	1	.....	1
Tugs	2	.....	2
Dredge	1	.....	1
Crane	1	.....	1
Launches	3	.....	3
Steamships	1	.....	1
Total	54	17	71
Vessels dry-docked:			
Steamships	4	1	5
Battleship	.....	1	1
Cruiser	.....	1	1
Submarines	.....	2	2
Submarine chaser	1	.....	1
Tugs	4	.....	4
Dredge	.....	1	1
Barge	1	.....	1
Supply boat	.....	1	1
Launch	1	.....	1
Total	11	7	18
Services to American vessels:			
Crews shipped	2	.....	2
Crew paid off	1	.....	1
Shipping article written	1	.....	1
Marine notes of protest entered	23	4	27
Services to American seamen:			
Seamen shipped	267	103	370
Seamen discharged	131	140	271
Seamen lodged and subsisted	15	16	31
Seamen repatriated	8	16	24
Seamen deserted	17	4	21
Wages of American seamen:			
Total wages earned	$20,799.46	$9,849.15	$30,648.61
Deductions approved by Deputy Shipping Commissioner	9,302.50	2,897.29	12,199.79
Balance due seamen	11,496.96	6,951.86	18,448.82
Paid to seamen	8,128.03	6,321.71	14,449.74
Received on deposit for seamen	3,368.93	630.15	3,999.08
Clearances issued	131	112	243
Bills of health issued	132	123	255
Movement of passengers.			
Disembarking at Canal ports:			
First class—			
From Atlantic ports	1,204	.....	1,204
From Pacific ports	194	95	289
Total, first class	1,398	95	1,493
Other than first-class—			
From Atlantic ports	1,002	.....	1,002
From Pacific ports	83	28	111
Total, other than first class	1,085	28	1,113
Total disembarking at Canal ports	2,483	123	2,606
Embarking from Canal ports:			
First class—			
For Atlantic ports	1,543	.....	1,543
For Pacific ports	328	130	458
Total, first class	1,871	130	2,001
Other than first class—			
For Atlantic ports	1,248	.....	1,248
For Pacific ports	258	330	588
Total, other than first class	1,506	330	1,836
Total, embarking from Canal ports	3,377	460	3,837

	Cristobal.	Balboa.	Total.
Remaining on board vessels:			
First class—			
Bound from Atlantic to Pacific ports	355	473	828
Bound from Pacific to Atlantic ports	498	691	1,189
Bound from Atlantic to Atlantic ports	360	.....	360
Bound from Pacific to Pacific ports	.....	3	3
Total, first class	1,213	1,167	2,380
Other than first class—			
Bound from Atlantic to Pacific ports	1,147	1,218	2,365
Bound from Pacific to Atlantic ports	665	766	1,431
Bound from Atlantic to Atlantic ports	177	.....	177
Total, other than first class	1,989	1,984	3,973
Total remaining on board	3,202	3,151	6,353
Total passengers arriving	5,685	3,274	8,959
Total passengers departing	6,579	3,611	10,190
Departures in excess of arrivals	894	337	1,231

LOCK OPERATION.

The following tabulations give the number of lockages, vessels through the locks, and the consumption of water for lockages, for the month of June, 1921, in comparison with that of the preceding month, and of the corresponding month of last year:

NUMBER OF LOCKAGES.

	Commercial.			Noncommercial.			Grand total.
	North.	South.	Total.	North.	South.	Total.	
Gatun	88	99	187	7	11	18	205
Pedro Miguel	88	107	195	14	21	35	230
Miraflores	87	106	193	15	17	32	225
Total lockages, June, 1921	263	312	575	36	49	85	660
Total lockages, May, 1921	321	284	605	30	46	76	681
Total lockages, June, 1920	278	298	576	.....	.....	80	656

NUMBER OF VESSELS PUT THROUGH LOCKS.

	Commercial.			Noncommercial.			Grand total.
	North.	South.	Total.	North.	South.	Total.	
Gatun	91	108	199	22	35	57	256
Pedro Miguel	90	109	199	30	44	74	273
Miraflores	90	109	199	30	40	70	269
Total vessels, June, 1921	271	326	597	82	119	201	798
Total vessels, May, 1921	338	304	642	75	119	194	836
Total vessels, June, 1920	294	316	610	.....	.....	168	778

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels	38	30	32
Canal equipment	19	44	38
Total noncommercial vessels	57	74	70

The consumption of water for lockages, loss in leakage, and for maintenance, was as follows:

	Gatun.	Pedro Miguel.	Miraflores.
	Cubic feet.	*Cubic feet.*	*Cubic feet.*
Lockages	758,640,000	676,680,000	674,590,000
Leakages	20,000,000	10,330,000	67,000,000
Maintenance	.....	3,610,000	12,990,000
Total consumption, June, 1921	778,640,000	690,620,000	754,580,000
Total consumption, May, 1921	815,200,000	755,850,000	770,990,000
Total consumption, June, 1920	797,280,000	672,250,000	714,280,000

METEOROLOGY AND HYDROGRAPHY.

The rainfall for the month over the Canal Zone and immediate vicinity, considered as a whole, was slightly above normal, the totals ranging from 19.67 inches at Porto Bello to 4.87 inches at Taboga. The greatest amount of precipitation recorded on any one day was 4.32 inches at Porto Bello on the 21st. The estimated rainfall over Gatun Lake watershed area was 13.01 inches, compared with an 11-year mean of 11.47 inches; while over the Chagres River watershed area above Alhajuela it was 14.69 inches, compared with a 20-year mean of 13.23 inches.

The discharge of the Chagres River at Alhajuela was 2,124 c. f. s., being 17 per cent below the 20-year June mean of 2,551 c. f. s., and furnished 37 per cent of the Gatun Lake total yield. The maximum momentary discharge was 13,400 c. f. s. at elevation 98.10 feet on the 9th, and the minimum flow was 736 c. f. s. on the 2d. There were 2 rises of over 5 feet at Alhajuela.

The Gatun Lake watershed total yield for the month was 5,665 c. f. s., being 9 per cent below the 11-year June average of 6,193 c. f. s. The maximum total yield for the month of June for the three years of record was 7,895 c. f. s. in 1918, while the minimum total yield was 4,477 c. f. s. in 1912. The net yield for the month was 5,175 c. f. s. The lake varied in elevation from 82.52 feet on the 2d to 84.30 feet on the 30th, an increase in elevation of 1.78 feet, with an increase in storage of 7,700,000,000 cubic feet.

The draft on the lake for lockages and power was 2,140 c. f. s., as compared with 2,056 c. f. s. for last month, and 2,084 c. f. s. for June, 1920. The ratio of water used for power and lockages was 2.86 to 1. The consumption of 1,585 c. f. s. at the hydroelectric station is the highest on record for the month of June. Six spillway operations were made at Gatun.

The Gamboa pumping plant and Brazos Brook reservoir drew 37.5 and 46.6 million cubic feet, respectively, from the lake.

Miraflores Lake varied from a maximum elevation of 54.40 feet on the 12th, to a minimum elevation of 51.70 feet on the 22d, and ended at elevation 52.20 feet midnight the 30th. The lake was lowered approximately 2 feet on the 21st for the Health Department.

Three slight seismic disturbances of near-by origin were recorded by the Balboa Heights instruments on the 1st, 5th, and 13th, respectively. These shocks, while severe enough to be felt, were too slight to cause any damage to property.

Maximum and minimum temperature records for the month were as follows:

Station.	Maximum.	Minimum.
Balboa Heights	90	72
Gamboa	89	70
Alhajuela	89	67
Gatun	89	73
Colon	91	73

The following gives a comparison of the monthly rainfall by sections for June, 1920, and June, 1921:

Section.	Rainfall.		Rainy days.	
	1921.	1920.	1921.	1920.
	Inches.	*Inches.*		
Pacific	8.29	8.18	25	18
Central	10.69	10.08	25	23
Atlantic	15.52	12.20	25	23

ELECTRICAL DIVISION.

The combined gross output of the Gatun hydroelectric station and of the Miraflores steam plant, the power distributed to consumers, the loss of power in transmission, etc., is shown in comparative form in the following tabulation:

	June, 1921.	May, 1921.	June, 1920.
Gross output, KWH:			
Gatun hydroelectric station	5,294,900	5,316,900	5,477,400
Miraflores steam plant	7,750	2,350	208,120
Combined gross output	5,302,650	5,319,250	5,685,520
Water consumption ... cubic feet	4,108,884,000	3,990,308,000	3,989,830,000
Oil consumption ... barrels	1,990	2,350	2,927
Power distributed to consumers ... KWH	4,404,350	4,413,164	4,753,138
Loss of power in plant auxiliaries, transmission, and transformation ... KWH	898,300	905,986	932,382
Per cent of loss of power to gross output	16.94	17.03	16.40

The work of converting the signal system between Panama and Pedro Miguel for single-track operation has been completed. The regular operation and maintenance work was carried on at all substations without any extraordinary occurrences.

Miscellaneous repairs and installations of electrical equipment were made on 43 vessels, 23 at Cristobal, and 20 at Balboa. There were 437 work orders issued for work to be performed by the Electrical Division in June, as compared with 393 in May.

The following new construction work was under progress during the month, with completion on June 30, as shown:

	Per cent completed.	
	May 31.	June 30.
Installation of new 8,400 KVA transformer and new tie-line equipment at Gatun substation	70	70
Installation of 2 complete feeder equipments at the Balboa substation	95	95
Extension of new underground distribution in New Cristobal	99	99
Installation of electrical equipment at hydroelectric station	40	45

SHOP, FOUNDRY AND DRY DOCK WORK.

At the Cristobal shops, miscellaneous repairs were made on 54 vessels, the more important of which were as follows:

The tug *San Juan* was docked, the bottom cleaned, and galvanized iron sheathing renewed where necessary. The bottom of the motor schooner *Satoe* was cleaned and painted, bulwarks fitted, and cables overhauled; crank shafts of 4 engines were put in lathe and crank pins machined up to uniform size; main bearings were examined and crank shafts and tunnel shafting were put in line. The bottom of the tug *Porto Bello* was cleaned and painted; crack in bottom of H. P. cylinder was electric welded, and broken stud in end of tail shaft was drawn out and new stud and keeper plate were manufactured and installed.

At the Balboa shops, miscellaneous repairs were made on 17 vessels during the month, 7 of which were dry-docked. The more important repair work was as follows:

Repairs to the battleship *España*, which had been damaged by grounding off the coast of Chile, and which had been in the dry dock since April 26, were completed during the month. The U. S. S. *Tacoma* was dry-docked and new port propeller shaft and port and starboard propellers installed. The submarines *R–24* and *R–26* were dry-docked and general repairs made, and a general overhaul of the dredge *Cascadas* was carried out.

The output of the Mechanical Division in patterns, castings, and foundry production for June, as compared with the preceding month, was as follows:

	June, 1921.			May, 1921.		
	Patterns.	Castings.	Pounds.	Patterns.	Castings.	Pounds.
Iron	7	339	40,608	15	567	35,409
Steel	2	451	57,302	5	566	74,992
Brass	25	1,271	22,341	23	1,182	21,211

The routine inspection, hostling, and repair of equipment for the Panama Railroad Company was carried on during the month. Four hundred and seventy-two job orders were completed during the month, with 243 remaining uncompleted on June 30.

CONSTRUCTING QUARTERMASTER.

The following statement represents the degree of completion on May 31 and June 30 of the more important work under way by the Construction Division of the Supply Department:

	Per cent completed.	
	May 31.	June 30.
Royal Mail Steam Packet Company's office, Cristobal	95	98
Repairs to 35 houses, Cristobal	95	99
Constructing 468 kitchenettes for silver townsite, Cristobal	75	95
All-America Cable Company's office, Cristobal	80	100
Manufacture of 300 wooden rocking chairs	60	75
Erection of boiler, cold storage plant, Cristobal	55	68
Rebuilding ovens, Cristobal bakery	99	100
Manufacture of 48 revolving chairs	95	100
Repairs to roof, Hotel Washington	80	99
Barrett specification roofing, Corozal storehouse	80	100
Constructing 2 type-17 cottages for All-America Cable Co	85	99
Erection of building for storage of equipment, Mount Hope	.....	50

Construction work for the Army and Navy is separately reported.

DREDGING DIVISION.

The general movement over the Cucaracha Slide area that developed the latter part of last month has continued throughout this month. One dipper dredge, on a 2-shift basis, worked continuously in front of this slide, removing during the month 133,400 cubic yards of material, which makes a total for the last fiscal year of 1,299,-500 cubic yards of material removed from this slide. Culebra and Barge Repair slides have shown very little movement. There was no interference with Canal traffic due to these slides.

The total excavation in June, including earth and rock, was 429,300 cubic yards, as follows:

Cubic yards.	Classified as—		Character of work.	Stations.	Equipment
	Earth.	Rock.			
				Atlantic Entrance.	
90,000	90,000	.....	Maintenance	270–00 to 355–00 E	*No. 86.*
				Gaillard Cut, Cucaracha Slide.	
133,400	26,700	106,700	Maintenance	1805–00 to 1814–00 E	*Gamboa.*
				Pacific Entrance, Miraflores P. I.	
67,500	17,500	50,000	Maintenance	2100–00 to 2112–00 W	*Paraiso.*
				Pacific Entrance.	
64,100	64,100	.....	Maintenance	2189–00 to 2196–00 W	*No. 84.*
70,000	70,000	.....	Maintenance	2105–70 to 2112–00 E	*No. 84.*
1,300	.....	1,300	Maintenance	2302–00 to 2302–30 W	*Cascadas.*
3,000	3,000	.....	Maintenance	2105–20 to 2105–70 E	*No. 86.*
429,300	271,300	158,000			

The material excavated at the various stations was disposed of as follows:

	Cubic yards.
Mindi Island, Atlantic entrance	26,000
East of Canal at Mindi	64,000
North of Gamboa	133,400
Sea dumps, Pacific entrance	68,800
Flats west of Canal, Pacific entrance	73,000
San Juan fill	64,100
Total	429,300

MUNICIPAL ENGINEERING DIVISION.

The total output of all pumping stations, and of the 3 filtration plants, the amount of water consumed by the cities of Panama and Colon, and sales of water to vessels, are shown below in comparative form:

	June, 1921.	May, 1921.	June, 1920.
	Gallons.	*Gallons.*	*Gallons.*
Pumping stations	703,156,500	758,324,750	755,867,900
Filtration plants	431,750,000	472,802,000	454,889,000
Water consumed by Panama City	94,137,000	100,896,000	83,293,000
Water consumed by Colon	57,934,250	59,217,750	51,421,500
Sales of water to vessels	10,039,282	9,975,647	13,646,747

Construction work, as itemized below, was under progress during the month, with completion on May 31 and June 30 as shown:

	Per cent completed.	
	May 31.	June 30.
Municipal work, New Cristobal townsite:		
Grading	55	55
Roads	97	97
Water lines	72	72
Sidewalks	86	86
Sanitary sewers	75	75
Installation of two 12-inch oil lines to Pier 6, Cristobal	60	70
Reconstruction of roads, Quarry Heights	95	100
New wash-water tank, Miraflores	95	95
Construction of new concrete sea wall, Santo Tomas Hospital	29	36
Construction of sewer and water lines, Southern Avenue, Panama City	50	50
Extension of roads, new Santo Tomas Hospital	6	6
Municipal work for 2 type-17 cottages, All-America Cable Co., Ancon	40	100
Storm drains, Santo Tomas Hospital	.....	50
Sewer construction, Santo Tomas Hospital	.....	50
Concrete roof, low service reservoir	.....	20
Connecting Pedro Miguel playshed with water and sewer system	.....	100

Municipal work performed for the Army and Navy is separately reported.

OCCUPANTS OF QUARTERS.

The occupants of Panama Canal and Panama Railroad quarters, shown in comparative form, were as follows:

	Men.	Women.	Children.	Totals.		
				June, 1921.	May, 1921.	June, 1920.
Americans	2,913	2,136	2,476	7,525	7,828	8,610
Europeans	143	36	34	213	273	550
West Indians	4,952	2,514	5,136	12,602	11,819	10,091
Totals, June, 1921	8,008	4,686	7,646	20,340	.....	.....
Totals, May, 1921	7,981	4,532	7,407	.....	19,920	.....
Totals, June, 1920	8,662	4,183	6,406	.....	.....	19,251

WORKING FORCE—NUMBER OF EMPLOYEES.

The following tabulation shows the number of gold and silver employees, as of June 15, 1921, by departments, together with a comparison of the working force of the preceding month, and that of the corresponding month of last year:

Department or division.	Employees.		Totals.		
	Gold.	Silver.	June, 1921.	May, 1921.	June, 1920.
Operation and Maintenance:					
Office	31	50	81	77	82
Building Division[1]	.....	.....	.....	376	2,073
Electrical Division	197	216	413	441	536
Municipal Engineering Division	90	760	850	862	1,282
Lock Operation	175	557	732	832	761
Dredging Division	167	755	922	929	1,311
Mechanical Division	645	1,000	1,645	1,659	2,708
Marine Division	191	518	709	658	670
Fortifications	61	181	242	302	332
Totals	1,557	4,037	5,594	6,136	9,755
Supply Department:					
Quartermaster	279	1,474	1,753	1,560	2,110
Subsistence	33	299	332	357	427
Commissary	239	1,166	1,405	1,462	1,918
Cattle Industry—Plantations	19	154	173	180	831
Hotel Washington	10	81	91	96	113
Totals	580	3,174	3,754	3,655	5,399

[1] All remaining employees of this division were transferred to Supply Department effective June 1, 1921.

Department or division.	Employees.		Totals.		
	Gold.	Silver.	June, 1921.	May, 1921.	June, 1920.
Accounting Department	226	9	235	234	260
Health Department	246	847	1,093	1,082	1,082
Executive	564	258	822	829	815
Totals	1,036	1,114	2,150	2,145	2,157
Panama Railroad:					
Superintendent	61	332	393	426	652
Transportation	94	125	219	241	330
Receiving and Forwarding Agency	66	687	753	559	2,045
Coaling Station	112	566	678	675	1,293
Totals	333	1,710	2,043	1,901	4,320
Grand totals, June, 1921	3,506	10,035	13,541	.....	.....
Grand totals, May, 1921	3,571	10,266	.....	13,837	.....
Grand totals, June, 1920	4,608	17,023	.....	.....	21,631

VITAL STATISTICS.

A total of 213 deaths occurred during the month of June, 1921, among the population of the Canal Zone and the cities of Panama and Colon, giving an annual death rate of 21.79 per thousand. Of the total deaths, 9 were due to external causes.

Of the above deaths, 97, or 46 per cent, occurred among children under 5 years of age.

The leading causes of death were pneumonia, tuberculosis, and diarrhea and enteritis.

There were 23 deaths of nonresidents of the Isthmus; these are not included in the above statistics.

Two hundred and ninety-seven live births were reported during the month and 21 stillbirths. Including stillbirths, this is equivalent to an annual birth rate of 32.52 per thousand population. Deaths among children under 1 year of age numbered 61, giving an infant mortality rate, based on the number of births reported for the month, of 205.38 per thousand.

Two hundred and twenty-four cases of malaria were reported during the month, divided as follows: 23 employees, 145 soldiers, and 56 nonemployees; of these 32 were contracted outside the Canal Zone. There were 3 cases of typhoid fever reported, 1 in Colon and 2 in the Canal Zone. Five cases of smallpox were reported, all in Panama. One death from smallpox occurred—the first death from this disease since 1916; this was a 1½ months old child suffering from septicemia and pyemia in addition to smallpox. There were 223 cases of influenza reported and 11 deaths.

RECEIPTS AND SALES OF MATERIALS AND SUPPLIES.

The total value of the material ordered on United States requisitions and received on the Isthmus during the month, sales to steamships from storehouses, and cash sales from stock, as compared with the preceding month, and the corresponding month of last year, were as follows:

	June, 1921.	May, 1921.	June, 1920.
Material received on U. S. requisitions during the month:			
Operation and maintenance	$398,824.99	$261,522.18	$731,624.03
Construction and equipment	7,743.71	1,626.40	18,183.87
Miscellaneous departments	18,099.09	8,679.84	28,445.48
Totals	424,667.79	271,828.42	778,253.38
Cash sales on the Isthmus:			
Stock	29,560.31	35,081.05	38,074.82
Fuel oil (includes sales to steamships)	66.47	840.40	227,064.28
Scrap	609.39	368.66	586.19
Obsolete and second-hand material	3,756.51	3,045.37	6,100.94
Totals	33,992.68	39,335.48	271,826.23
Sales to steamships from storehouses:			
Miscellaneous stock items	13,361.82	21,336.62	19,022.01
Fuel oil	.....	.....	212,295.75
Totals	13,361.82	21,336.62	231,317.76

Respectfully,

JAY J. MORROW,
Governor.

Distribution of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, June, 1921.[1]

From—	North America. United States. North Atlantic ports.	North America. United States. South Atlantic ports.	North America. United States. Gulf ports.	North America. United States. Total, United States.	North America. West Indies.	North America. Cristobal, C. Z.	North America. Total, North America.	Europe. Belgium.	Europe. British Isles.	Europe. Denmark.	Europe. France.	Europe. Germany.	Europe. Holland.	Europe. Italy.	Europe. Sweden.	Europe. Norway.	Europe. Spain.	Europe. Europe.[2]	Europe. Total, Europe.	East coast, South America.	Grand total.	Per cent of total cargo.
South America:																						
Chile	4,492	35,221	11,585	51,298	.....	189	51,487	2,123	12,959	.....	530	5,041	1,523	.....	.....	.....	364	5,311	27,851	.....	79,338	23.7
Colombia	1,024	.....	.....	1,024	.....	1,515	2,539	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,539	0.7
Ecuador	1,048	.....	.....	1,048	.....	2,669	3,717	.....	.....	.....	.....	530	.....	.....	97	.....	.....	326	953	.....	4,670	1.4
Peru	1,014	.....	.....	1,014	.....	2,052	3,066	.....	8,625	.....	.....	15	.....	.....	.....	.....	.....	.....	8,640	.....	11,706	3.5
[2]West coast, South America	942	.....	.....	942	.....	3,251	4,193	.....	144	.....	.....	.....	.....	.....	.....	.....	.....	.....	144	720	5,057	1.5
Total, South America	8,520	35,221	11,585	55,326	.....	9,676	65,002	2,123	21,728	.....	530	5,586	1,523	.....	97	.....	364	5,637	37,588	720	103,310	30.8
North America:																						
West coast, United States	63,466	2,953	.....	66,419	5,659	.....	72,078	803	39,055	2,000	.....	8,249	.....	17,376	540	504	...	16,779	85,306	24	157,408	47.0
West coast, Canada	2,476	.....	.....	2,476	.....	.....	2,476	.....	.....	.....	780	.....	.....	.....	.....	.....	...	.....	780	.....	3,256	0.9
West coast, Central America	719	.....	.....	719	.....	3,927	4,646	.....	.....	.....	.....	.....	.....	.....	905	1,710	...	843	3,458	.....	8,104	2.4
Total, North America	66,661	2,953	.....	69,614	5,659	3,927	79,200	803	39,055	2,000	780	8,249	.....	17,376	1,445	2,214	...	17,622	89,544	24	168,768	50.3
Asia:																						
China	1,275	.....	.....	1,275	.....	.....	1,275	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	1,275	0.3
Japan	3,694	.....	.....	3,694	.....	.....	3,694	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	3,694	1.1
Philippine Islands	11,119	.....	.....	11,119	.....	.....	11,119	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	11,119	3.4
[2]Far East	202	.....	445	647	.....	.....	647	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	647	0.2
Total, Asia	16,290	.....	445	16,735	.....	.....	16,735	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	16,735	5.0
Australasia:																						
Australia	344	.....	.....	344	.....	.....	344	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	344	0.1
New Zealand	.....	.....	.....	.....	.....	.....	.....	.....	36,421	.....	.....	.....	.....	.....	.....	.....	...	.....	36,421	.....	36,421	11.0
[2]Australasia	5,000	.....	.....	5,000	.....	.....	5,000	.....	3,709	.....	.....	.....	.....	.....	.....	.....	...	.....	3,709	.....	8,709	2.6
Total, Australasia	5,344	.....	.....	5,344	.....	.....	5,344	.....	40,130	.....	.....	.....	.....	.....	.....	.....	...	.....	40,130	.....	45,474	13.7
Hawaii	849	.....	.....	849	.....	.....	849	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	849	0.2
Grand totals	97,664	38,174	12,030	147,868	5,659	13,603	167,130	2,926	100,913	2,000	1,310	13,835	1,523	17,376	1,542	2,214	364	23,259	167,262	744	335,136	100.0
Per cent of total cargo, June, 1921	29.1	11.4	3.6	44.1	1.7	4.1	49.9	0.9	30.1	0.6	0.4	4.2	0.4	5.2	0.4	0.7	0.1	6.9	49.9	0.2	100.0	.....
Per cent of total cargo, May, 1921	25.2	2.7	8.6	36.5	1.5	3.5	41.7	0.5	28.8	0.2	1.6	4.1	1.7	7.7	.....	.....	...	9.1	55.6	0.7	.....	.....

[1] Figures represent tons of 2,240 pounds.

[2] General cargo not routed so as to allow segregation among various ports.

Distribution of Cargo Passing Through the Panama Canal from the Atlantic to the Pacific, June, 1921.[1]

From—	South America.						North America.						Asia.					Australasia.					
	Chile.	Colombia.	Ecuador.	Peru.	West coast, South America.[2]	Total, South America.	West coast, United States.	West coast, Canada.	West coast, Central America.	Balboa, C. Z.	West coast, Mexico.	Total, North America.	China.	Japan.	Philippines.	Far East.[2]	Total, Asia.	Australia.	New Zealand.	Australasia.[2]	Total, Australasia.	Grand totals.	Per cent of total cargo.
North America:																							
North Atlantic ports	6,693	917	104	3,612	8,806	20,132	59,810	.....	2,470	.....	.....	62,280	19,370	9,559	505	13,994	43,428	.....	7,411	15,193	22,604	148,444	41.2
South Atlantic ports	1,970	.....	.....	2,490	.....	4,460	1,000	.....	.....	.....	.....	1,000	370	1,000	25	4,000	5,395	.....	2,673	.....	2,673	13,528	3.8
Gulf ports	3,580	19	156	7	.....	3,762	7,969	6,800	.....	7,183	3,785	25,737	9,337	27,530	....	5,107	41,974	5,837	2,150	274	8,261	79,734	22.1
Total, United States	12,243	936	260	6,109	8,806	28,354	68,779	6,800	2,470	7,183	3,785	89,017	29,077	38,089	530	23,101	90,797	5,837	12,234	15,467	33,538	241,706	67.1
East coast, Mexico	27,712	.....	.....	.....	.....	27,712	20,000	21,857	.....	.....	2,571	44,428	.....	.....	....	.....	.....	.....	.....	.....	.....	72,140	20.0
Atlantic terminus, Panama Canal	581	201	62	780	2,323	3,947	.....	.....	4,725	.....	.....	4,725	.....	.....	....	.....	.....	.....	.....	.....	.....	8,672	2.4
Canada	.....	.....	.....	.....	.....	.....	.....	536	.....	.....	.....	536	.....	.....	....	.....	.....	.....	.....	.....	.....	536	0.2
Total, North America	40,536	1,137	322	6,889	11,129	60,013	88,779	29,193	7,195	7,183	6,356	138,706	29,077	38,089	530	23,101	90,797	5,837	12,234	15,467	33,538	323,054	89.7
Europe:																							
Belgium	94	.....	.....	.....	.....	94	9,653	.....	.....	.....	.....	9,653	.....	.....	....	.....	.....	.....	.....	.....	.....	9,747	2.7
British Isles	569	.....	62	.....	1,305	1,936	1,859	616	.....	.....	.....	2,475	.....	.....	....	.....	.....	.....	1,672	2,746	4,418	8,829	2.4
Denmark	.....	.....	.....	.....	2,000	2,000	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	2,000	0.6
France	2	.....	.....	.....	203	205	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	205	0.1
Germany	574	.....	.....	18	3,033	3,625	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	3,625	1.1
Italy	.....	.....	.....	.....	736	736	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	736	0.2
Sweden	.....	.....	.....	.....	100	100	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	100	.01
[2]Europe	263	.....	.....	.....	1,456	1,719	8,536	80	.....	.....	.....	8,616	.....	.....	....	.....	.....	.....	.....	.....	.....	10,335	2.8
Total, Europe	1,502	.....	62	18	8,833	10,415	20,048	696	.....	.....	.....	20,744	.....	.....	....	.....	.....	.....	1,672	2,746	4,418	35,577	10.0
East coast, South America	.....	456	.....	.....	.....	456	318	.....	.....	.....	.....	318	.....	180	....	.....	180	.....	.....	.....	.....	954	0.3
Grand totals	42,038	1,593	384	6,907	19,962	70,884	109,145	29,889	7,195	7,183	6,356	159,768	29,077	38,269	530	23,101	90,977	5,837	13,906	18,213	37,956	359,585	100.0
Per cent of total cargo, June, 1921	11.7	0.4	0.1	2.0	5.5	19.7	30.3	8.3	2.0	2.0	1.8	44.4	8.1	10.6	0.2	6.4	25.3	1.6	3.9	5.1	10.6	100.0	.....
Per cent of total cargo, May, 1921	9.2	0.3	0.1	4.7	5.1	19.4	36.5	0.1	0.2	2.8	.....	39.6	5.4	6.5	0.9	11.6	24.4	2.6	5.6	7.8	16.0	.....	.....

[1] Figures represent tons of 2,240 pounds.

[2] General cargo not routed so as to allow segregation among various ports.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight July 23, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Canadian Farmer	16	13.00	17	6.21	17	14.30	17	15.35	British	Canadian Government	251.0	44.0	11.0	Tampico	Vancouver	Ballast		2,553	1,618
Tsurugisan Maru	15	23.32	17	6.23	17	15.33	17	17.05	Japanese	Mitsui Bussan K. Kaisha	358.0	42.0	24.4	Galveston	Yokohama	General	4,829	4,100	3,033
Venezuela	15	22.45	17	12.00	17	18.32	18	15.12	American	Pacific Mail Steamship Co	380.0	49.0	22.0	Baltimore	San Francisco	General	1,500	6,033	4,353
Atlanta City	17	10.10	17	13.35	17	20.35	17	21.43	American	Isthmian Steamship Line	424.0	56.0	27.0	Mobile	Dalney	General	7,612	7,539	5,448
Affinity [1]	15		17	7.10	18				American	E. J. Hooper				Cristobal	Balboa				
Hector	16	21.40	18	6.09	18	18.20	19	3.19	Dutch	Royal Dutch W. I. Mail	322.0	44.0	20.2	Hamburg	Valparaiso	General	3,200	3,677	2,717
Port Bowen	17	6.26	18	6.35	18	18.55	18	19.54	British	Commonwealth and Dom. Line	480.0	62.0	25.0	Liverpool	Auckland	General	3,447	10,745	7,849
Quillota	17	6.00	18	10.35	18	19.17	18	20.25	British	Pacific Steam Navigation Co	361.0	46.0	19.1	New York	Guayaquil	General	541	4,768	2,956
Pacific [2]	19	9.48	19	13.12	19	20.10	20	1.40	Swedish	Johnson Steamship Line	362.0	51.0	16.6	Sweden	San Francisco	General	2,181	5,360	4,089
Santa Ana	19	17.45	19	6.10	19	13.49	20	17.10	American	W. R. Grace & Co	360.0	51.0	21.9	New York	Talcahuano	General	1,956	5,776	4,081
Julia Luckenbach	20	1.00	20	7.05	20	16.26	21	11.19	American	Luckenbach Line	436.0	57.0	23.6	New York	San Francisco	General	4,325	8,543	6,427
Indien [2]	20	5.05	20	8.10	20	17.08	20	18.06	Danish	Orient Steamship Line	390.0	53.0	14.5	Copenhagen	San Francisco	Ballast		6,173	4,418
Ucayali	14	15.30	20	10.25	20	18.05	20	19.11	Peruvian	Peruvian Line	374.0	46.0	18.1	Cristobal	Callao	General	313	4,466	2,405
West Camak	20	2.35	20	11.30	20	18.40	20	19.30	American	Williams Dimond Co. (S. B.)	410.0	54.0	17.6	Liverpool	San Francisco	General	2,100	6,622	4,880
Arabia [3]			20	6.35	20	9.37			Panaman	San Blas Trading Co	103.0	24.0	12.0	Cristobal	Gatun			123	69
Texan	21	12.30	21	7.11	21	14.54	21	16.00	American	American-Hawaiian Line	471.0	57.0	19.5	New York	Los Angeles	General	2,547	9,154	7,033
San Ubaldo	20	20.55	21	7.16	21	16.03	21	17.08	British	Eagle Oil Transport Co	412.0	53.0	25.5	Tampico	Valparaiso	Gasoline, etc	6,719	6,232	4,274
Duquesne	21	12.30	21	7.30	21	17.40	21	18.46	American	Green Star Line	395.0	55.0	23.5	Port Arthur	Canton	Kerosene	6,000	7,285	5,346
Springfield	21	7.01	21	8.25	21	17.03	21	18.00	American	N. Atl. and West. S. S. Co. (S. B.)	410.0	54.0	17.0	Philadelphia	Seattle	General, steel	1,900	6,576	4,971
Steel Mariner	21	10.27	21	11.10	21	18.30	21	22.35	American	United States Steel Products Co.	425.0	56.0	25.0	New York	San Diego	Steel, general	7,200	7,539	5,448
Kentucky	21	8.00	21	12.30	21	20.09	21	20.59	British	Ellerman & Bucknall Line	447.0	56.0	26.6	New York	Yokohama	General	8,000	7,825	5,921
Cauca	17	14.34	22	6.04	22	13.54	22	15.15	British	Pacific Steam Navigation Co	246.0	35.0	14.0	Cristobal	Guayaquil	General	141	1,582	1,023
San Jose	15	20.10	22	6.05	22	15.30	22	18.30	American	Pacific Mail Steamship Co	283.0	37.0	19.3	Cristobal	San Francisco	General	1,658	2,352	1,602
Charlton Hall	22	1.00	22	6.45	22	16.24	23	6.49	British	United States Steel Products Co.	400.0	50.0	24.9	Mobile	Seward	General	5,742	5,714	4,161
Oreoma	21	15.05	22	7.30	22	14.50	22	16.00	British	Pacific Steam Navigation Co	511.0	62.0	24.9	Liverpool	Valparaiso	General	1,500	12,267	7,942
Port Lincoln	22	6.17	22	8.25	22	17.29	22	20.20	British	Commonwealth and Dom. Line	426.0	54.0	25.3	New York	Sydney	General	3,804	7,544	5,256
Palm Branch	21	17.24	22	13.20	22	19.45	22	20.35	British	F. & W. Ritson	360.0	45.0	18.1	London	Valparaiso	General	1,300	4,161	3,133
Vera Cruz [4]	6–28	4.40	23	9.35	23	18.15	24	1.15	Mexican	Mexican Government	125.0	23.0	13.6	Vera Cruz	Salina Cruz	Ballast		278	87
Mazatlan [4]	6–24	2.40	23	9.35	23	18.15	24	1.15	Mexican	Mexican Government	125.0	23.5	12.0	Vera Cruz	Salina Cruz			278	87
Guayamas [4]	6–25	10.52	23	9.35	23	18.29	24	1.15	Mexican	Mexican Government	125.0	23.5	12.0	Vera Cruz	Salina Cruz	Ballast		278	87
Acapulco [4]	6–24	6.31	23	9.35	23	18.31	24	1.15	Mexican	Mexican Government	125.0	23.5	12.0	Vera Cruz	Salina Cruz	Ballast		278	87

[1] Launch. [2] Motor ship. [3] Auxiliary schooner. [4] Trawler.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Cauca	16	9.10	17	6.44	17	14.34	22	6.04	British	Pacific Steam Navigation Co.	246.0	35.2	13.3	Guayaquil	Cristobal	(5)	588	1,582	1,448
Oak Branch	16	10.05	17	6.49	17	15.50	17	21.52	British	Nautilus Steamship Co., Ltd.	385.0	49.8	23.0	Antofagasta	Liverpool	General	6,086	5,209	4,031
Bendoran	16	18.20	17	7.56	17	17.00	17	18.35	British	Ben Line, Ltd.	378.0	46.0	23.6	Portland	Hampton Rds.	Wheat	5,430	4,232	3,096
Boston Maru	17	1.00	17	8.39	17	17.12	18	14.20	Japanese	Kokusai Kisen Kaisha	400.0	53.0	25.0	Portland	Rotterdam	Wheat, flour	7,221	5,376	4,252
Ottar	17	10.30	17	11.51	17	18.50	18	16.06	Norwegian	J. C. Knudsen	262.6	37.0	15.0	Guayaquil	New York	General	820	1,815	1,222
Maricopa	6–25	8.30	17	12.38	17	19.45	17	19.45	Norwegian	W. Wilhelmsen	430.0	57.0	16.0	Tocopilla	Tampico	Ballast	.....	7,000	5,105
Benvenue	17	14.50	18	7.54	18	20.45	18	23.35	British	Ben Line, Ltd.	379.0	46.1	23.2	Portland	Limerick	Wheat	6,325	4,173	3,011
Leitrim	17	23.00	18	8.21	18	19.30	18	21.45	British	Union Steamship Co.	470.0	60.2	24.6	Sydney	Liverpool	General	4,600	10,050	6,794
Mobile City	18	1.00	18	8.34	18	20.40	18	22.35	American	Isthmian Steamship Co.	395.5	55.0	26.0	Honolulu	New York	(6)	7,200	7,285	5,252
Barima	18	6.00	18	9.06	18	21.20	.....	.....	British	Pacific Steam Navigation Co.	220.0	37.0	12.1	Tumaco	Cristobal	Colombian prod.	744	1,651	918
Brush	18	6.00	18	9.36	18	22.30	19	9.26	American	N. Atl. & Western S. S. Co.	390.0	54.2	23.0	Tacoma	Poughkeepsie	Lumber	5,172	6,161	4,433
Gen. O. H. Ernst	18	7.00	18	10.32	18	19.22	21	14.20	American	Panama Railroad Steamship Line	356.0	45.3	18.0	Buenaventura	New York	General	944	4,503	2,764
Honduras	18	7.00	18	10.55	18	22.05	19	19.43	French	French Line	389.9	51.3	22.0	Mollendo	Venezuela	Hops	4,000	6,020	4,363
Knight Companion	18	13.00	18	13.54	18	23.20	19	9.25	British	Alfred Holt & Co.	470.4	58.0	26.6	Manila	Boston	General	8,000	8,546	6,263
Portsaid Maru	18	18.15	19	6.31	19	20.20	19	20.50	Japanese	Kokusai Kisen Kaisha	385.0	51.0	25.6	Kobe	Leghorn	Wheat	7,320	5,914	4,399
Whakatane	20	5.30	20	7.30	20	17.35	20	17.35	British	New Zealand Shipping Co.	420.0	54.0	25.0	Auckland	London	General	4,000	7,131	5,324
Tsushima Maru	20	7.30	20	9.14	20	18.54	20	20.36	Japanese	Nippon Yusen Kaisha	445.0	58.0	18.6	Shanghai	New York	General	5,807	7,458	5,140
Balboa	21	6.35	21	8.06	21	14.50	24	11.25	American	Colombian Maritime Co.	100.0	29.1	14.1	Buenaventura	Cristobal	Coffee, books	517	741	350
Meiwa Maru	21	8.30	21	9.59	21	18.25	21	19.23	Japanese	Taisho Kauin Kaisha	445.0	58.0	28.0	Portland	Norfolk	Wheat	8,800	8,299	5,979
Harry Luckenbach	21	21.00	22	8.05	22	17.40	22	17.40	American	Luckenbach Line	448.9	60.2	28.0	San Pedro	Philadelphia	(7)	6,000	9,281	6,853
Laura C. Hall	22	13.15	23	6.15	23	15.00	24	6.24	British	Pacific Metals Corporation	81.0	25.6	10.0	Buenaventura	Cristobal	(8)	25	132	72
Cape Romain	22	15.20	23	6.28	23	14.50	23	14.50	American	Alt. Gulf and Pacific S. S. Corp.	376.4	52.3	25.0	Astoria	Baltimore	General	4,826	5,142	3,568
Huallaga	23	6.50	23	8.21	23	15.30	.....	.....	Peruvian	Peruvian Line	360.0	44.7	18.2	Ilo	Cristobal	General	1,219	4,514	2,386
Acajutla	23	11.00	23	11.31	23	17.52	.....	.....	British	Pacific Steam Navigation Co.	215.7	33.5	15.6	Champerico	Cristobal	General	966	1,273	706
Charles H. Cramp	23	12.45	23	13.44	23	20.20	23	20.20	American	Atl. Gulf & Pacific S. S. Corp. S. B.	404.6	53.9	26.0	Billingham	Baltimore	General, lumber	6,500	6,755	4,750
Chile	19	6.00	23	14.45	23	21.43	.....	.....	British	Pacific Steam Navigation Co.	350.3	43.1	16.0	Valparaiso	Cristobal	General	172	4,065	2,668
Melville Dollar	23	13.50	23	15.04	23	22.36	24	6.00	British	Canadian Robert Dollar Co.	370.0	50.0	24.1	Taku Bar	New York	General	6,585	5,153	3,938

[5] Ivory nuts, hats, and general. [6] Sugar and pineapples. [7] Wool and canned goods. [8] Coffee and case of gold.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 17	Atenas	United Fruit Co.	New Orleans.	July 17	Atenas	United Fruit Co.	Bocas del Toro.
July 17	Caribbean	Panama Railroad Cattle Industry	Cartagena.	July 18	Hannibal	United States Navy	High seas.
July 18	Solana	Pacific Mail Steamship Co.	Tampico.	July 20	Solana	Pacific Mail Steamship Co.	Tampico.
July 18	Gen. W. C. Gorgas	Panama Railroad Steamship Line	New York via Haiti.	July 20	Atenas	United Fruit Co.	New Orleans.
July 19	San Gil	United Fruit Co.	Boston.	July 20	Toloa	United Fruit Co.	New York.
July 19	Lima [2]	Curacao Shipping Co.	Curacao.	July 20	San Gil	United Fruit Co.	Boston.

(Continued on page 796, column 2.)

Coal Prices at Los Angeles and San Diego.

Spreckels Brothers Commercial Company, of Los Angeles, Cal., quotes the following prices on coal as of July 7, 1921, at Los Angeles and San Diego:

King Utah bunker coal delivered f. o. b. vessels alongside dock of the Outer Harbor Dock and Wharf Company, Los Angeles Harbor (San Pedro), is $15.22 per gross ton of 2,240 pounds, and f. o. b. vessels alongside Spreckels Wharf, San Diego, $16.72, trimming extra at cost and accident insurance, plus 10 per cent.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending July 23, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged.	Laded.
				Tons.	*Tons.*
Venezuela	Pacific Mail Steamship Co.	.....	July 17	.....	292
Ottar	Caribbean Steamship Co.	July 17	July 18	101	(2)
Quillota	Pacific Steam Navigation Co.	July 17	July 18	40	135½
Point Bonita	Pacific Mail Steamship Co.	.....	July 19	.....	113
Ucayali	Peruvian Line	.....	July 20	.....	316
Benedict	Pacific Steam Navigation Co.	.....	July 20	.....	750
Caribbean	Panama Railroad Cattle Industry	July 17	July 21	400	264
Cauca	Pacific Steam Navigation Co.	July 17	July 22	588	182¾
Honduras	French Line	July 18	July 19	(1)	273
Solana	Pacific Mail Steamship Co.	July 18	July 20	10,000	(2)
Gen. O. H. Ernst	Panama Railroad Steamship Line	July 18	July 21	88	730
Gen. W. C. Gorgas	Panama Railroad Steamship Line	July 18	July 23	2,429	3,222
Pacific	Johnson Steamship Line	July 19	July 19	18	(2)
Toloa	United Fruit Co.	July 19	July 20	292	96
San Gil	United Fruit Co.	July 19	July 20	25	(2)
Jan Van Nassau	Royal Netherlands W. I. Mail	July 19	July 21	42	2,177
Atenas	United Fruit Co.	July 20	July 20	3½	5
Cartago	United Fruit Co.	July 20	July 21	1,159	96
Balboa	Caribbean Steamship Line	July 21	.....	517¼	.....
San Jose	Pacific Mail Steamship Co.	.....	July 22	.....	1,658
Colon	Panama Railroad Steamship Line	July 22	.....	1,977	.....
Coronado	Elders & Fyffes Ltd.	July 23	July 23	102	(2)
Huallaga	Peruvian Line	July 23	.....	1,219	.....
Acajutla	Pacific Steam Navigation Co.	July 23	.....	966	.....
Laura C. Hall	Pacific Metals Corporation	July 23	.....	25	.....
Chile	Pacific Steam Navigation Co.	July 23	.....	167	.....
Varg	Caribbean Steamship Line	July 23	.....	300¼	.....

[1] No cargo discharged. [2] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending July 23, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged.	Laded.
				Tons.	*Tons.*
Anyo Maru	Toyo Kisen Kaisha	July 17	July 18	1	6
Venezuela	Pacific Mail Steamship Co.	July 17	July 17	8	.....
Barima	Pacific Steam Navigation Co.	July 18	July 18	2	.....
Hector	Royal Dutch West India Mail	July 18	July 18	19	.....
Chile	Pacific Steam Navigation Co.	July 19	.....	2	.....
Laura C. Hall	Pacific Metals Transportation Co.	July 22	July 23	5	.....
San Jose	Pacific Mail Steamship Co.	July 22	July 22	.....	17
Charlton Hall	United States Steel Products Co.	July 22	July 23	.....	73

Ships at Cristobal Shops.

The following vessels were at the Cristobal shops for repairs during the week ended July 25:

Steamships *Colon* and *General W. C. Gorgas*, miscellaneous repairs and painting to engine, deck, and steward departments; *Balboa*, manufacture 3 projectiles for lifeline gun; manufacture 4 crosshead bolts with nuts for steering engine; remetal crank-shaft bearing for dynamo engine; furnish 4 laborers and foreman to scale port boiler; motor ship *Lima*, steam out all cargo tanks and clean same; manufacture and install bulwarks on port and starboard sides of ship from bow aft; calk bulkheads between Nos. 1 and 2 tanks where leaking, also rivets; convert seamen's water-closet in forward starboard part of forecastle into room for boatswain and storekeeper; extend fore and aft steel bulkhead in forecastle to forward end of forecastle; manufacture, fit, and install water-tight doors as directed; run out port and starboard

anchors and examine and repair chains and shackles as directed; repair steering gear and renew parts as directed by planner; test pipe lines and suction buckets and repair as found necessary; draw pistons; examine wrist pin and crank pin bearings and repair; open up and clean out mufflers; overhaul air compressors, circulating pumps, and bilge pumps; readjust eccentric straps, examine and repair all sea valves, etc.; tug *Tavernilla*, dock and undock, calk boat deck; electric weld grooves in towing bitts aft; clean and paint; remove rudder and true up shaft; renew bushing and gland bushing, remove port dynamo and install new turbine wheel; examine fire pump water end cylinder, etc.; U. S. submarine *R-27*, make and machine 1 head for muffler as sample; steamships *Caribbean*, renew staybolts, nuts, and washers in boiler; repair bilge pump, discharge valve, etc; *Solana*, braze copper steam pipe; make cement box in way of damage on starboard side and install cement; *Atenas*, services of diver to examine bottom; launch *Kariger*, repair cylinder and manifold; steamships *Coppename*, *Barima*, *Cartago*, *Huallaga*, *Honduras*, and launch *Dalia*, minor repairs.

PREVIOUSLY REPORTED.

Steamship *Cauca*, miscellaneous repairs, including dry-docking; U. S. S. *Sciota*, calk leaky rivets in frame No. 2 at 12-foot water line and miscellaneous engine repairs; motor ship *Satoe*, general overhauling, including dry-docking; barge *No. 117*, renewing plates, etc.; steamship *Vera Cruz*, miscellaneous repairs to main engines; U. S. S. *Forse*, miscellaneous repairs, including dry-docking; barge *No. 19*, renewing plates, etc.; U. S. submarine *R-25*, renewing defective rivets in engine foundation and general repairs; U. S. Navy barges, make bridles.

Saturday and Sunday Night Passenger Trains Discontinued.

Effective with the new time table No. 33, Sunday, August 7, the following Saturday and Sunday night passenger trains will be discontinued:

Train No. 9, leaving Colon at 11.30 p. m., Saturday.
Train No. 10, leaving Panama at 11.30 p. m., Saturday.
Train No. 11, leaving Colon at 9.35 p. m., Sunday.
Train No. 12, leaving Panama at 9.35 p. m., Sunday.

Extension of Period of Eligibility for Reinstatement.

Under date of June 25, 1921, an Executive Order was issued, providing for the amendment of Rule IX, section 1, paragraph (*a*), of the Civil Service rules, extending the 1-year period of eligibility for reinstatement under certain conditions, and for the striking out of section 2 of the same rule. The amended paragraph is quoted below, the italicized part indicating the nature and extent of the amendment in question:

"Unless otherwise provided hereinafter a person may be reinstated only to the department or independent Government establishment from which separated and upon requisition made within 1 year from the date of his separation. *When the Commission and the appointing officer are in agreement that the public interest requires such unusual action, the Commission may authorize waiver of the 1-year limit herein prescribed under the following time limitations: Two years where service has been 2 years but less than 3 years; 3 years where service has been 3 years but less than 4 years; 4 years where service has been 4 years but less than 5 years; and 5 years where service has been 5 years or more.*"

Official Circulars.

Leave Accumulation.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 7, 1921.

HEADS OF DEPARTMENTS AND DIVISIONS:

The conditions of employment contain the following regulations relative to payment in commutation of leave and deferring the time of entering upon leave:

"29. Thirty days' cumulative leave will be allowed each employee paid on a monthly or annual basis for each year of his service, and 20 days to each employee paid on an hourly basis. This leave will be due after completing 10 months' service each year and may be taken when the employee's service can be spared. It may be taken annually or left to accumulate to the credit of the employee, provided, however, that the maximum number of days leave with pay of all kinds which may be granted at any one time or which may be commuted into a cash payment at termination of service is 120.

* * * * * * *

"35. After accumulating leave of all kinds amounting to 120 days, an employee ceases to earn additional cumulative leave until he is granted all or part of the cumulative leave already earned, unless he shall enter on cumulative leave within 2 months thereafter, or be ordered by the Governor to defer taking leave for official reasons.

"36. When an employee's service is terminated, a cash payment in commutation of leave will be made to him for the number of days cumulative leave due, plus the annual leave due. In the

event of his death his estate will be paid the sum due." (Circular No. 601-59.)"

Some complaint has been made by employees who have had the time for entering upon leave deferred for the good of the service, that, when discharged on account of reduction of force, they can not be paid for all leave earned unless they are permitted to report for duty at the end of such period as will leave not more than 120 days' leave due, which can then be commuted into a cash payment.

It is not believed that there have been many cases where employees, if they had made request, would not have been granted leave at some time during the period of their service sufficient to prevent any such question arising. The difficulties which have arisen have been due to the failure of employees to go on leave until they have accumulated their full quota and then, on account of the number of employees desiring to go at the same time, it has been necessary to extend the period which leave might be taken. These extensions have usually been made with the interests of the employee in mind, with the result that the time in which leave may be taken has been extended beyond the period that it was actually necessary to retain the employee.

If employees, whose time for entering upon leave had been extended, had actually requested leave as soon as they could be spared, it is believed that there would be very few if any cases where employees would not obtain all the leave to which they are entitled under the rules. The cases which have most frequently arisen are those in which the employees, realizing they were employed on work which was likely to be discontinued, have preferred to continue to work, avoid the expense of vacations, and secure on termination of service as large a sum as possible in commutation of leave.

In recommending the extension of time during which any employee may enter upon leave, heads of departments and divisions should consider carefully the probability of future reductions of force and should, so far as possible in making such reductions, permit employees to whom they have refused leave, to take sufficient leave to reduce their total to not more than 120 days.

These instructions are not to be considered as in any way increasing the rights of employees to leave, but are to be followed by the heads of departments and divisions in postponing leave, in determining what reductions in force may be necessary, and in selecting employees for discharge by reduction of force.

JAY J. MORROW,
Governor.

Leave of Absence.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 16, 1921.

TO HEADS OF DEPARTMENTS AND DIVISIONS:

A few instances have recently come to the attention of this office in which employees were allowed to report from leave of absence, and enter on a second leave of absence, after working only one or two days, without obtaining prior authority from this office in accordance with Paragraph 2 of Circular 602. This practice is an evasion of the intent of the rule which prohibits payment for more than 120 days' leave at one time and therefore should be discontinued.

In future, an employee should not be granted an additional leave of absence immediately after reporting for duty, where the sum of the absences would be more than 120 days, unless the request for the subsequent leave of absence is recommended by the head of the department and approved by this office.

By direction of the Governor:

C. A. MCILVAINE,
Executive Secretary.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 793.

PORT OF CRISTOBAL—Continued.

*ARRIVALS.

Date.	Vessel.	Line.	From—
July 19	Jan Van Nassau	Royal Netherlands W. I. Mail	Amsterdam.
July 19	Toloa	United Fruit Co.	New York.
July 19	Cartago	United Fruit Co.	New Orleans.
July 19	Ateuas	United Fruit Co.	Bocas del Toro.
July 22	Hannibal	United States Navy	High seas.
July 22	Colon	Panama Railroad Steamship Line	New York.
July 23	Coronado	Elders & Fyffes, Ltd.	Port Limon.
July 23	Varg	P. Johannessen	New York.

*DEPARTURES.

Date.	Vessel.	Line.	For—
July 21	Caribbean	Panama Railroad Cattle Industry	Cartagena.
July 21	Cartago	United Fruit Co.	New Orleans.
July 21	Benedict	Booth Steamship Line	Cartagena.
July 21	Jan Van Nassau	Royal Netherlands W. I. Mail	Puerto Colombia.
July 23	Gen. W. C. Gorgas	Panama Railroad Steamship Line	New York via Haiti.
July 23	Coronado	Elders & Fyffes, Ltd.	Kingston.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—
July 17	Anyo Maru	Toyo Kisen Kaisha	Valparaiso.

Date.	Vessel.	Line.	For—
July 18	Anyo Maru	Toyo Kisen Kaisha	Hongkong.

*Other than ships passing through the Canal.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Volume XIV. Balboa Heights, C. Z., August 3, 1921. No. 51.

The Panama Canal Record for Employees.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 29, 1921.

To all concerned—Volume XV of THE PANAMA CANAL RECORD will begin with the issue of August 17, 1921. Effective with that number the distribution of copies free to employees of The Panama Canal and Panama Railroad on the Isthmus will be discontinued, and thenceforth employees may have it sent to their post-office address upon payment of the regular subscription price as shown on the first page of each issue—$1.50 a year in the Canal Zone, the United States, and the Republic of Panama; $2 a year elsewhere. Distribution for official use and for information of shipping interests will continue as heretofore.

JAY J. MORROW,
Governor.

Length, Beam, and Draft of Commercial Vessels.

A classification of the commercial vessels passing through the Panama Canal in June, 1921, by length, beam, and salt water draft shows the following:

	Atlantic to Pacific.	Pacific to Atlantic.	All vessels.	Per cent of all ships.
Length.				
Less than 100 feet	2	1	3	1.6
100 to 200 feet	2	3	5	2.6
200 to 300 feet	20	16	36	18.7
300 to 400 feet	31	31	62	32.3
400 to 500 feet	44	36	80	41.7
Over 500 feet	4	2	6	3.1
Total ships	103	89	192	100.0
Aggregate length (feet)	37,852.0	32,633.5	70,485.5	.....
Average length (feet)	367.5	366.7	367.1	.....
Beam.				
Less than 30 feet	3	4	7	3.6
30 to 40 feet	12	11	23	12.0
40 to 50 feet	28	20	48	25.0
50 to 60 feet	52	48	100	52.1
60 to 70 feet	6	6	12	6.3
70 to 80 feet	2	.....	2	1.0
Total ships	103	89	192	100.0
Aggregate beam (feet)	5,120.1	4,380.1	9,500.2	.....
Average beam (feet)	49.7	49.2	49.5	.....
Draft.				
Less than 15 feet	15	10	25	13.0
15 to 20 feet	27	22	49	25.5
20 to 25 feet	37	39	76	39.6
25 to 30 feet	23	15	38	19.8
30 feet and over	1	3	4	2.1
Total ships	103	89	192	100.0
Aggregate draft (feet)	2,146.4	1,894.9	4,041.3	.....
Average draft (feet)	20.8	21.3	21.0	.....

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight July 30, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Laura C. Hall [1]	23	15.00	24	6.24	24	13.35	25	15.30	British	Pacific Metals Corporation	81.0	25.0	9.0	Cristobal	Buenaventura	General	5	132	72
Gene Crawley	24	10.30	24	11.23	21	18.50	24	20.19	American	Sinclair Navigation Co	305.0	44.0	24.0	Tampico	Corinto	Crude oil	4,545	3,332	2,512
Balboa	21	14.50	24	11.25	24	17.56	24	19.00	American	Colombian Maritime Co	190.0	29.0	11.0	Cristobal	Buenaventura	Ballast		741	350
Cauyeq No. 2350			24		24	12.08			American	E. B. Sipe				Cristobal	Gatun				
Canadian Prospector	24	19.10	25	6.36	25	13.43	25	14.55	British	Canadian Government	400.0	52.4	17.8	Alexandria	Vancouver			5,858	4,033
Theodore Roosevelt [2]	25	17.30	25	6.58	25	14.30	25	15.22	Norwegian	Fred Olsen & Co	426.0	56.0	21.0	Antwerp	San Francisco	General	5,400	7,593	5,637
Saint Joseph	24	12.34	25	11.39	25	18.19	25	19.30	French	Cie. Generale Transatlantique	398.0	50.0	15.0	Antwerp	Valparaiso	General	205	5,979	4,170
Canadian Conqueror	25	11.39	25	12.15	25	19.29	26	10.20	British	Canadian Government	400.0	52.0	22.6	New York	Bristol	Oil and general	5,154	5,954	4,127
S. C. 285			25	10.10	25	18.10	26	2.30	American	United States Navy				Cristobal	Balboa				
Dorset	26	11.27	26	12.40	26	20.30	27	7.33	British	Federal Steam Navigation Co	460.0	58.0	27.6	Liverpool	Auckland	General	4,200	9,188	6,581
Corona [3]	26	16.32	27	11.46	27	16.33			American	F. E. Davis	104.0	15.0	6.0	New York	San Diego	Ballast		83	13
Amazon Maru	27	12.52	27	13.18	27	21.05	27	22.14	Japanese	Osaka Shosen Kaisha	425.0	56.0	25.0	New York	Manila	General	6,676	7,901	5,629
Chile	23	21.43	28	6.18	28	12.53	28	14.45	British	Pacific Steam Navigation Co	350.0	43.0	18.3	Cristobal	Valparaiso	General		4,065	2,668
Rimutaka	28	9.59	28	10.39	28	17.46	29	0.40	British	New Zealand Shipping Co	457.0	58.0	25.0	London	Wellington	General	1,800	9,159	6,883
S. C. 284	25	15.08	28	9.30	28	14.48			American	United States Navy				Cristobal	Balboa				
West Haven	28	19.55	29	6.20	29	14.26	29	15.30	American	Atlantic Gulf Steamship Co	409.0	51.0	22.0	New York	San Francisco	General	6,088	6,665	5,020
Acajutla	23	17.52	30	9.55	30	16.18	30	17.10	British	Pacific Steam Navigation Co	215.7	33.5	14.1	Cristobal	Champerico	General		1,273	706
Asia [2]	30	9.15	30	13.21	30	19.53	30	20.57	Danish	East Asiatic Steamship Co	425.3	55.2		Copenhagen	San Francisco	General	2,941	7,396	5,588

[1] Motor schooner. [2] Motor ship. [3] Yacht.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Steel Inventor	24	13.15	24	14.09	24	21.48	25	2.03	American	United States Steel Products Co.	441.0	56.2	27.6	San Francisco	United King	General	7,600	7,539	5,448
Duendes	24	23.30	25	7.40	25	15.30	25	16.40	British	Pacific Steam Navigation Co	390.0	50.0	24.0	Coronel	London	(4)	5,312	6,014	4,494
S. C. 284			25	8.11	25	15.08	29	9.30	American	United States Navy	110.0	16.0		Balboa	Cristobal				
Munaires	26	1.00	26	7.41	26	14.30	26	16.50	American	Munson Line	370.0	53.1	23.6	Raymond	New York	Lumber	5,154	5,577	4,225
Manavi	26	20.30	27	7.43	27	15.10	1	6.23	British	Pacific Steam Navigation Co	216.0	35.1	13.9	Guayaquil	Cristobal	General	227	1,357	884
Jamaica	28	0.40	28	7.31	28	13.55	31	12.00	British	Pacific Steam Navigation Co	220.0	34.0	10.2	Tumaco	Cartagena	General	296	1,187	622
S. C. 285	28	12.04	29	7.12	29	16.15			American	United States Navy	110.0	16.0		Sea	Cristobal				
Yosemite	28	22.30	29	8.15	29	16.59	31	1.30	American	Thorndyke & Trenholm (S. B.)	402.6	53.0	24.6	Portland	Dublin	Wheat	6,678	6,604	4,969

[4] Grain, wool, hides, ores, bark, and beeswax.

Aysen	29	4.00	29	8.22	29	17.38			Chilean	Chilean Line	379.6	44.3	19.0	Valparaiso	Cristobal	General	470	4,535	3,068
Banffshire	29	5.00	29	8.42	29	19.00	29	21.07	British	Turnbull, Martin & Co	430.0	53.5	24.0	Melbourne	London	(9)	5,678	6,772	4,604
Surrey	29	5.15	29	9.01	29	20.10	29	22.00	British	Federal Steam Navigation Co	400.4	62.8	25.6	Lyttleton	London	Frozen, general	6,985	10,000	7,285
Kirkcudbrightshire[5]	28	23.30	29	9.55					British	Thomas Law & Co	250.0	38.3	21.6	Asia Island	London	Guano	2,350	1,584	1,427
Pallas	29	10.00	29	12.24	29	20.50	29	22.05	British	Swayne & Hoyt (S. B.)	380.5	53.1	20.0	San Francisco	Buenos Aires	(10)	3,530	5,659	4,174
Arizonan	29	12.20	29	13.09	29	22.10	30	2.30	American	American-Hawaiian Line	470.1	57.2	30.0	Hawaiian Isls	New Orleans	Sugar	13,000	9,158	6,969
Swifteagle	27	12.35	30	7.39	30	17.18			American	Swiftsure Transport Co	464.6	60.2	25.6	Portland	Falmouth[8]	Wheat	10,033	8,473	5,997
Orion[6]	29	19.00	30	7.53	30	16.39	1	11.43	American	United States Navy	514.0	65.0	18.1	Puget Sound	Hampton R'ds	Navy supplies	200		
Transvaal	30	2.00	30	10.48	30	18.58	30	20.10	Danish	Orient Steamship Co	349.8	49.7	24.0	Seattle	Bremen	General	6,283	4,853	3,476
R-24[7]	6-12	15.00	30	12.20	30	20.50			American	United States Navy	175.0	16.0		Balboa	Cristobal				
Manulani	29	22.45	30	12.27	30	20.46	30	20.46	American	Matson Navigation Co	480.6	62.2	30.9	Hilo	Philadelphia	Sugar	13,105	10,317	7,563
Quillota	30	14.30	30	15.01	30	21.45			British	Pacific Steam Navigation Co	361.4	46.2	18.0	Guayaquil	New York	General	976	4,768	2,956

[5] Sailer. [6] Collier. [7] Submarine. [8] For orders. [9] Cold storage and general. [10] Rice, beans, lumber, and general.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

*ARRIVALS.				*DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 24	Coppename	United Fruit Co	New Orleans.	July 24	Coppename	United Fruit Co	Bocas del Toro.
July 25	Abangarez	United Fruit Co	New Orleans.	July 25	Hannibal	United States Navy	High seas.
July 26	Calamares	United Fruit Co	New York.	July 25	Varg	P. Johannessen	New York.
July 27	Astmahco III	Astmahco Navigation Co	Colorado Bar.	July 27	Coppename	United Fruit Co	New Orleans.
July 27	Coppename	United Fruit Co	Bocas del Toro.	July 27	Calamares	United Fruit Co	New York via Port Limon.
July 27	Tivives	United Fruit Co	New York.	July 27	Abangarez	United Fruit Co	New Orleans via Bocas del Toro.
July 28	Turrialba	United Fruit Co	New York.	July 28	Tivives	United Fruit Co	New York via Colombia.
July 28	Caribbean	Panama Railroad Cattle Industry	Cartagena.	July 28	Turrialba	United Fruit Co	New York via Kingston.
July 28	Alexandrian	F. Layland & Co	Liverpool.	July 29	Colon	Panama Railroad Steamship Line	New York via Port au Prince.
July 30	St. Mihiel[11]	United States Army	New York via San Juan.	July 30	Alexandrian	F. Layland & Co	New Orleans.
July 30	San Pablo	United Fruit Co	Boston via Habana.				
July 30	Puerto Rico	French Line	St. Nazaire via wayports.				
July 30	U. S. S. Hannibal	United States Navy	Porto Bello.				

[11] U. S. Army transport.

PORT OF BALBOA.

July 24	Silverado	General Steamship Corp. (S. B.)	Callao.	July 24	Silverado	General Steamship Corp. (S. B.)	San Francisco.
July 24	Wallingford	General Steamship Corp. (S. B.)	Los Angeles.	July 26	Wallingford	General Steamship Corp. (S. B.)	Valparaiso.

*Other than ships passing through the Canal.

Cash Balance in Appropriations—June, 1921.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 23, 1921.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: Herewith is a report showing the commissary sales, financial receipts, and expenditures, and of the cash balance available in The Panama Canal appropriations, for the month of June, 1921, as compared with the preceding month, and with the corresponding month of last year:

	June, 1921.	May, 1921.	June, 1920.
Cash balance available for expenditure:			
In Canal appropriations	[1]$6,587,322.64	[1]$7,051,969.56	[1]$12,665,316.67
In fortification funds allotted to The Panama Canal for expenditure	[1]473,781.75	[1]473,781.75	[1]4,517,354.98
Payments made from appropriations:			
By Paymaster on the Isthmus	1,320,644.03	1,416,780.45	1,585,712.19
By Disbursing Clerk, Washington, D. C	392,282.07	542,139.41	902,554.92
To the Panama Railroad Co. (for commissary books)	264,296.78	279,967.38	373,512.32
Collections on the Isthmus:			
Repaid to appropriations	1,129,286.25	864,120.60	1,348,074.34
Commissary and other trust funds	266,278.17	281,797.79	375,294.39
Tolls	751,967.12	835,914.57	704,210.53
Sales of water	3,375.05	6,930.25	61.25
Postal receipts	10,612.03	9,007.50	11,794.45
Licenses, taxes, court fees, fines	3,913.61	3,614.56	4,458.11
Interest on bank balances	25,000.00	.....	.....
Sales of obsolete material	.....	1,350.00	.....
Total collections on Isthmus	2,190,432.23	2,002,735.27	2,443,893.07
Collections by Disbursing Clerk at Washington, D. C	170,695.05	1,682,49	8,822.26
Deposits with Assistant Treasurer of United States	40,405.00	33,600.00	108,900.00
Canal Zone and miscellaneous funds:			
Receipts	171,984.82	175,428.77	166,958.04
Disbursements	247,862.06	210,427.73	224,481.02
Pay rolls on the Isthmus	1,053,050.18	1,125,283.38	1,355,500.02
Requisitions for purchases in the United States	123,083.97	115,807.91	1,293,250.22
Sales of commissary supplies:			
To The Panama Canal	106,708.70	100,507.44	134,321.71
To steamships, other than those of the United States Government and Panama Railroad Steamship Line	42,149.02	45,385.75	80,338.78
To the Panama Railroad, including its steamships and the Hotel Washington	19,911.64	15,672 15	39,969.74
To the United States Government, including the Army and Navy	143,339.69	128,012.49	226,441.56
To individuals and companies, through charge accounts	22,972.02	21,899.98	30,127.25
To individuals purchasing coupons	389,156.00	430,276.92	614,716.07
Total commissary sales	724,237.07	741,754.73	1,125,915.11

[1] Balance on last day of month.

Respectfully,
JAY J. MORROW,
Governor.

New Chinese Line in Panama Service.

Advice has been received from the Chungwha Navigation Company of Hongkong that a new service between Hongkong and Valparaiso, via Honolulu, San Francisco, and Panama will be instituted with the sailing from Hongkong on July 30 of the steamship *Hwah Ping;* due at Balboa September 3.

Postal and Cable Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending July 30, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged.	Cargo— Laded.
				Tons.	*Tons.*
Coppename	United Fruit Co	July 24	July 24	(1)	1
Laura C. Hall	Pacific Metals Corporation		July 24		4
Saint Joseph	French Line	July 24	July 25	59	(2)
Duendes	Pacific Steam Navigation Co	July 25	July 25	25	(2)
Abangarez	United Fruit Co	July 25	July 27	1,322	39
Calamares	United Fruit Co	July 26	July 27	263	362
Coppename	United Fruit Co	July 27	July 27	25	4
Tivives	United Fruit Co	July 27	July 28	20	428
Chile	Pacific Steam Navigation Co		July 28		240¾
Manavi	Pacific Steam Navigation Co	July 27		226	
Jamaica	Pacific Steam Navigation Co	July 28		289½	
Turrialba	United Fruit Co	July 28	July 28	15	1
Alexandrian	Leyland Line	July 28	July 30	425	233
Caribbean	Panama Railroad Cattle Industry	July 28		502	
Aysen	Chilean Steamship Line	July 29		530	
Puerto Rico	French Line	July 30		54	
Quillota	Pacific Steam Navigation Co	July 30		190	
Asia	East Asiatic Steamship Co	July 30	July 30	39	(2)
San Pablo	United Fruit Co	July 30	July 30	20	[3]200
Acajutla	Pacific Steam Navigation Co		July 30		715

[1] No cargo discharged. [2] No cargo laded. [3] Pounds.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending July 30, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged.	Cargo— Laded.
				Tons.	*Tons.*
Laura C. Hall	Pacific Metals Corporation	July 24	July 25		95
Wallingford	United States Shipping Board	July 24	July 26	10	51
Chile	Pacific Steam Navigation Co	July 28	July 28		6
Acajutla	Pacific Steam Navigation Co	July 30	July 30		1

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the two weeks ended July 30:

Steamship *Chile*, draw tail shafts and rewood bearings; repack glands; clean out water service connection to starboard gland; overhaul, grind in, and repack sea valves as designated by chief engineer; scale and clean internally and fire side of starboard boiler; renew fusible plugs; overhaul boiler mountings and renew one stud on auxiliary steam valve; repair engineer's department pipes and valves as required; redrive loose rivets behind starboard dynamo; install spare piston rods on port dynamo engine; overhaul ash winch; repair anchor windlass and perform miscellaneous engineer's department work; U. S. submarine chaser *V–12*, dock; open up all sea valves; clean, grind in, repack, and otherwise repair as required; overhaul strainers; examine rudder; overhaul gudgeons and pintles; repack deck stuffing box; repair propellers and shafts; repair main and auxiliary engines; renew roller and ball bearings in main journal bearings of Delco lighting system; repair anchor and windlass; perform miscellaneous deck repairs; clean copper bottom and repair or renew copper sheathing; repair skylights, air ports, and ventilators; renew life lines and guy wires, and renew clamps on awning stanchions; manufacture one 12-foot lifeboat; steamships *Empire State*, weld arm for throttle valve, starboard main engine; *Anyo Maru*, service of diver to examine propeller; yacht *Adventuress*, renew galley range smoke pipe from top of range to deck in galley; steamship *General George W. Getty*, dock, stage, clean, and paint bottom; draw propeller wheel and shaft and rewood bearing; dress tail-shaft sleeve; repair propeller blades if necessary; renew bottom of wrapper sheet; renew defective stay bolts, etc.; calk, rerivet, and electric-weld as necessary; manufacture 1 spare set metallic packing and springs for H. P. and L. P. piston rods of main engine; rebore control valve and manufacture and install new piston valve on steering engine; take lost motion out of engine and gear mounted on it; renew one 2½-inch brass nipple, forward bottom side of feed water heater; overhaul, grind in, and repack all sea valves and repair strainers; renew all bad order hull zincs; overhaul pintles and gudgeons

of rudder; renew wood deck and canvas from ladder to after end and from engine room skylight to rail on starboard side; repair lifeboat and boat falls; and test and repair air tanks on boat; renew glass and 3 brass studs and nuts in one forecastle air port; fair air port and frame, port side of lazarette, aft; repair or renew 7 stanchions in forward hold; launch *Aguila*, place on blocks; overhaul clutch and line up engine; install bronze plates on rudderpost; calk butts and renew 2 planks in bottom; steamship *Wallingford*, replace and grind in suction valve to fit spare piston on refrigerating system; make necessary repairs to air ports.

PREVIOUSLY REPORTED.

Dredge *Gamboa*, docking and hull repairs; U. S. submarine *R–24*, miscellaneous repairs; welding armature cores on main motors to spiders and stiffening motor frames and foundations; steamship *Guardian*, docking and miscellaneous repairs; tug *Coco Solo*, manufacture 3 eccentric rods for generators and electric weld back end of boilers; launch *P–1*, rebuilding of hull; steamships *Katrina Luckenbach*, repairs to main turbines; *Western Knight*, repairs to main engine and crosshead slipper; *Maricopa*, miscellaneous repairs to boilers, engines, and auxiliary machinery; and docking, cleaning, and painting; French cruiser *Jules Michelet*, docking and miscellaneous hull repairs; steamship *Chile*, docking and tail-shaft repairs; U. S. submarine chaser *V–12*, docking and general repairs to hull and machinery.

The following vessels were at the Cristobal shops for repairs during the week ended August 1:

Steamships *Colon*, *General G. W. Goethals*, *Cristobal*, *Ulysses*, miscellaneous repairs and painting to engine, deck, and steward departments; *Astmahco III*, remetal crank brass, main engine; remove valve seat and manufacture 8 complete sets valve and seats for bilge pump; examine and repair all bilge valves and lines; *Pomona*, remetal crank pin brass, dynamo engine; repair copper pipe; make new cylinder cover; U. S. S. *Pinola*, manufacture one valve stem guide as per sketch furnished; manufacture 10 keepers as per sketch furnished; manufacture 8 copper coils as per sample and directions; steamship *Caribbean*, renew stay-bolt nuts and washers in boiler where leaking; weld packing box for fire pump piston rod steam end; manufacture 8 metallic packing rings for each of the H. P. and L. P. piston rods, both main engines; manufacture, fit, and install bushing for wrist pin bearings and true up or renew wrist pins as found necessary in compressor end of ice machine; examine and repair crank shaft; examine and repair all sea valves; manufacture 50 hardwood wedges, as sample; examine and repair rudder, etc.; launch *Nard*, steamships *Yosemite*, *Puerto Rico*, *Acajutla*, *Abangarez*, *Heredia*, and *Metapan*, minor repairs.

PREVIOUSLY REPORTED.

Motor ship *Satoe*, general overhauling, including dry-docking; barge *No. 117*, renewing plates, etc.; U. S. S. *Forse*, miscellaneous repairs, including dry-docking; barge *No. 19*, renewing plates, etc.; U. S. submarine *R–25* (at Coco Solo), renewing defective rivets in engine foundations and general repairs; motor ship *Lima*, general overhauling, including dry-docking; tug *Tavernilla*, remove and true up rudder shaft, docking, and miscellaneous repairs.

Accessions to the Canal Library.

The following are among the new books received during the past month:

MacKenzie, L. K., "Story of a fortunate youth;" Mardin, "Peace, power, and plenty;" Masters, E. L., "Mitch Miller;" Miller, L. E., "Hidden people;" Mosher, J. A., "Effective speaking voice;" Mulder, Arnold, "Sand doctor;" O'Brien, Fred, "White shadows in the South Seas;" Oemler, Marie, "Purple heights;" Oppenheim, E. P., "Curious quest;" Oppenheim, E. P., "Jacob's ladder;" Orczy, Emmuska, "First Sir Percy;" Packard, F. L., "Further adventures of Jimmie Dale;" Parker, Sir Gilbert, "No defense;" Pedler, Margaret, "Splendid folly;" Popence, Wilson, "Manual of tropical and subtropical fruits;" Porter, E. H., "Sister Sue;" Price, R. B., "Silver shoal light;" Reeve, A. B., "Constance Dunlap;" Rideout, H. M., "Footpath way;" Rinehart, M. R., "Poor wise man;" Riseing, Lawrence, "She who was Helena Cass;" Ross, E. A., "South of Panama;" Sabin, "Boys' books of frontier fighters;" Sargent, H. H., "Strategy of the western front;" Schaeffer, Mrs. E. S., "Isabel Sterling;" Schauffler, R. H., "Fiddler's luck;" Sheffield, Lyba, "Swimming simplified;" Sheehan, P. P., "House with a bad name;" Sinclair, May, "Romantic;" Taylor, M. M., "Mogfoots;" Tilden, "Art of lawn tennis;" Tracy, Louis, "Number seventeen;" Van Buren, Martin, "Autobiography;" Vermilye, K. J., "Next corner;" Wallace, Dillon, "Lure of the Labrador wilds;" Wells, Carolyn, "Mystery of the sycamore;" Wells, H. G., "Russia in the shadows;" Wharton, E. N., "Age of innocence;" Williamson, C. N. and A. M., "Set in silver."

The juvenile library has been transferred from the Balboa School to the Panama Canal Library, Balboa Heights, and is now open every day.

September Weather Probabilities.

The following weather conditions may be expected at the Canal entrances during the month of September, 1921. Predictions are based on the records at Colon and Balboa Heights for the past 14 and 15 years, respectively.

Winds—Light southeast and variable winds will prevail over the Atlantic Coast with an average hourly velocity of about 7 miles, although a maximum velocity as high as 35 miles an hour may occur during the passage of local rain or thunder showers.

Light northwest or north winds will prevail over the interior and the Pacific Coast, with an average hourly velocity of about 6 miles. A maximum velocity of 30 to 35 miles an hour may be expected during local rain or thunder storms, but such storms seldom last for more than a few minutes.

Rain.—The average September rainfall on the Atlantic Coast for a period of 50 years is 12.54 inches, while the average rainfall at the Pacific entrance for a period of 24 years is 7.94 inches. Heavy showers may be expected on both coasts. The average number of days during the month on which the rainfall equals or exceeds 1 inch has been 4 on the Atlantic Coast and 3 on the Pacific side.

Fogs.—Few, if any, fogs are likely to occur on either coast, but night and early morning fogs will be numerous over the interior. The average number of fogs over the Gaillard Cut section of the Canal during the month of September, is about 25, 57 per cent of which have been dense. (In a dense fog objects can not be distinguished at a distance of 1,000 feet.) All fogs that occur may be expected to lift or become dissipated by 8.30 a. m.

Temperature—The average shade air temperature over both coasts will be approximately 80° F. The maximum temperature for the month is not likely to exceed 94° F. at the Pacific entrance, or the minimum to be lower than 68° F., while at the Atlantic entrance a temperature higher than 91° F. or lower than 71° F. is not likely to occur. The mean daily range in temperature will be about 13° F. on the Pacific Coast and 10° F. on the Atlantic.

Barometric pressure—Except for the well-marked diurnal changes, variations in atmospheric pressure on the Isthmus are very slight, and have little value in indicating future weather conditions. The mean atmospheric pressure for the month will be about 29.84 inches over both coasts. The highest pressure is not likely to be above 29.95 inches, or the minimum lower than 29.70 inches.

Relative humidity—The percentage of moisture in the air varies but slightly from month to month during the rainy season. The average humidity for the month of September on both coasts will be close to 87 per cent. On the Pacific Coast the average maximum nighttime humidity will be about 95 per cent, while the average minimum daytime value will be close to 74 per cent. On the Atlantic Coast the same values will be about 92 and 79 per cent, respectively.

Storms—Local wind, thunder or rain squalls of limited extent may be expected quite frequently over the Isthmus during the month of September. No severe general storms are likely to occur as the Canal Zone lies without the regions of violent and widespread atmospheric disturbance. The West Indian hurricane season is from June to November, but the normal paths of these storms during the coming month lie well to the northward of the Isthmus. A rough sea with fresh winds may be experienced occasionally outside the breakwater following the passage of these storms. The average number of days during September on which thunderstorms occur is about 18 on both coasts.

General cloudy weather will prevail and smooth to moderate seas may be expected at the Pacific entrance.

COMMISSARY NOTES.

Household Expense Book.

A new edition of the *Household Expense Book* has been issued to meet the demand for a convenient system of keeping personal accounts. This book is a revision of the one printed by The Panama Canal Press some years ago, and particularly adapted to local requirements. The price of this book is only $1.

Price Reductions.

Reductions ranging from 10 to 50 per cent have been made the past week in the prices of dry goods, boots and shoes, leather goods, and hardware. Among the principal items affected are shirts, hose for men, women, and children, felt hats, work pants, overalls, bedspreads, umbrellas, dress materials, curtain goods, underwear, towels, suit cases, hand bags, aluminum ware, and practically all styles and qualities of footwear carried in the retail stores. This is the most sweeping reduction ever made in the prices of commissary stocks, the items being marked to sell at replacement values or less, as nearly as can be ascertained.

Pullman Reservations Out of New York.

The Executive Office is advised that the Division Passenger Agent of the Pennsylvania Railroad System, Mr. Wm. Pedrick, Jr., 263 Fifth Avenue, New York City, has been instructed to honor any requests he may receive by letter or wire from Panama Canal or Panama Railroad employees for Pullman reservations over their lines out of New York, and, if so requested, such employees will be met on their arrival by the Pennsylvania Railroad Steamship Passenger Agent, who will notify them of the reservations made at their request and render such other assistance as he can to expedite their transfer and make pleasant their trip.

Gasoline and Air.

At the request of the members of the Union Church and Christian Science Church, the hours for selling gasoline and furnishing air to employees on Sundays and holidays have been changed from 9 to 11 to 8 to 9.30 a. m. This for the reason that the gasoline and air pumps are in close proximity to these churches, and a good deal of noise was made, to the inconvenience of both churches during their services.

Flowers from Corozal Hospital.

Effective at once pink and red roses will be sold at 50 cents per dozen. Flowers intended for patients or others at Ancon Hospital can be delivered at about 8 a. m. or 4.30 p. m. daily; and deliveries made elsewhere by arrangement.

Asparagus and other ferns, hedges, cannas, palms, rose cuttings, etc., also for sale at reasonable prices.

Civil Service Examinations.

The following examinations are announced by the United States Civil Service Commission. Bulletins giving details of the examinations for positions for which there are likely to be a number of qualified persons on the Isthmus are posted at Canal post offices and clubhouses. In cases where such announcements are not posted, persons interested may obtain data on application to the Board of Civil Service Examiners, Balboa Heights, C. Z. (telephone 286):

Assistant curator (male and female); $1,500 to $1,800 a year; form 2118; announcement No. 342; age, 25 but not 70 years; vacancies in Division of Mechanical Technology, National Museum, Washington, D. C.; August 9, 1921.[1]

Assistant horticulturist (male and female); $2,400 to $2,500 a year; form 2118; age, 25 but not 40 years; vacancies in Bureau of Plant Industry, Department of Agriculture, Washington, D. C.; August 30, 1921.[1]

Assistant in information (male and female); $1,800 to $3,600 a year; form 2118; announcement No. 345; age, below 55 years; vacancies in Department of Agriculture, Washington, D. C.; August 16, 1921.[1]

Examiner of accounts, Interstate Commerce Commission, No. 427-amended, supplemental; receipt of applications to close July 26, 1921.

Civil engineer; mechanical and electrical engineer; No. 574-supplemental; receipt of applications to close July 26, 1921.[2]

Farmer; No. 617-amended, supplemental; effective July 14, 1921, the maximum age limit for the position of farmer in the Indian Service has been changed from 55 to 50 years.[2]

Physician; No. 1957-amended, supplemental; effective September 1, 1921, applicants for the position of physician in the Indian Service must have reached their twenty-first but not their fiftieth birthday on the date of making oath to the application.[2]

Applicants for the position of physician in the Public Health Service and in the Coast and Geodetic Survey must have reached their twenty-first but not their seventieth birthday on the date of making oath to the application.[2]

Laboratory aid in agricultural technology (male and female); $840 to $960 a year; form 1312; announcement No. 346; age, below 70 years; vacancies in Bureau of Plant Industry, Department of Agriculture, Washington, D. C.; September 7, 1921.

Mineral examiner (male and female); $1,620 to $1,800 a year; form 1312; announcement No. 350; age, 21 but not 50 years; vacancies in General Land Office Service, August 17, 1921.

Laboratory aid in plant pathology (male and female); $900 a year; form 304; announcement No. 349; age, 18 but not 45 years; vacancies in Bureau of Plant Industry; August 17, 1921.

Aid (male and female); $1,500 a year; form 1312; announcement No. 311-amended; age, 21 but not 30 years; vacancies in Lighthouse Service, Third District, Tomkinsville, N. Y.; August 30, 1921.[1]

Assistant in date scale eradication (male and female); $1,200 to $1,500 a year; form 1312; announcement No. 335-amended; age, 18 but not 45 years; vacancies in Federal Horticultural Board, Department of Agriculture; September 7, 1921.

Dairy husbandman (male and female); $2,500 to $3,500 a year; form 2118; announcement No. 353; age, 21 but not 50 years; vacancies in Dairy Division, Bureau of Animal Industry, Department of Agriculture, Washington, D. C.; August 30, 1921.[1]

Director, southern forest experiment station (male and female); $3,840 a year; form 1312; age, 30 but not 45 years; vacancies in Forest Service, Department of Agriculture, New Orleans, La.; September 6, 1921.[2]

Guard (male and female); $720 a year; form 304; age, 21 but not 60 years; vacancies in the State, War, and Navy Building, Washington, D. C.; September 7, 1921.[2]

Medical interne (male and female); $1,200 a year; form 1312; announcement No. 638-amended; age, 20 but not 70 years; vacancies in Saint Elizabeth's Hospital, Washington, D. C.; November 1, 1921.[1]

Personal service officer (male and female); $1,600 to $2,400 a year; form 1312; announcement No. 358; age, below 50 years; vacancies under Federal Board for Vocational Education, November 1, 1921.[1]

Plant engineer (male and female); $3,000 a year; form 1312; announcement No. 352; age, below 70 years; vacancies at Picatinny Arsenal, Dover, N. J.; August 30, 1921.[1]

Scientific assistant (male and female); $1,400 a year; form 1312; announcement No. 175; age, 20 but not 40 years; vacancies in Bureau of Fisheries, Department of Commerce, Beaufort, N. C.; September 21, 1921.

Trained nurse (male and female); $840 a year; form 1312; announcement No. 1952-amended; age, 20 but not 45 years; vacancies in Federal Board for Vocational Education and in Indian and Public Health Services.[3]

[1] Nonassembled. Date given for nonassembled examinations is the last day for filing applications and they must be in the hands of the Commission at Washington prior to the hour of closing business on that date.

[2] Applications will be received at any time until further notice.

[3] Nonassembled. Applications will be received at any time until further notice.

Deceased Employees.

The estates of the following deceased employees of The Panama Canal or the Panama Railroad Company are now in process of settlement, and any claims against these estates, or any information which might lead to the location of heirs, or to the recovery of property, bank deposits, postal savings, or postal money order deposits, or any other moneys due them, should be presented at the office of the Administrator of Estates at once in order that the estates may be settled as soon as possible. All claims should be itemized, sworn to before a notary public, or other public officer having a seal, and submitted in duplicate. These names will be published but once:

Name.	Check No.	Native of—	Isthmian residence.	Employed by—	Date of death.
Edward Bell	35598	Barbados	Silver City	Mechanical Division	July 19, 1921.
Enrique Diaz	31921	Cuba	Colon	Panama Railroad Co.	July 8, 1921.
Vivian Marshall	59271	Jamaica	Panama	Supply Dept.	July 18, 1921.
Samuel Patterson	21138	Barbados	Panama	Supply Dept.	July 15, 1921.

Official Circulars.

Storage of Reserve Equipment.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 8, 1921.

CIRCULAR No. 631-9:

In line with instructions contained in Circular No. 631-6, arrangements have been made to turn over to the General Storekeeper for shelter and preservation large pieces of equipment (exclusive of floating equipment) for which departments and divisions have no immediate use, but which may be needed by The Panama Canal or Panama Railroad at some future time.

Equipment so turned in will be issued to the first department or division having use for it.

Funds have been allotted to the General Storekeeper to provide a storage shed or sheds and for the necessary labor and materials to keep the equipment in usable condition.

The Board of Appraisal will place a value on such equipment at the time it is turned in and the General Storekeeper will become accountable, physically and financially. (Commodity No. 200.) In issuing this equipment the General Storekeeper will use a separate series of invoice numbers.

Items of large equipment will remain in the equipment account by name or number; smaller items which are carried in the Division's Machinery and Tool Accounts will be removed from the Division's Account at the appraised value and charged to a "Reserve Equipment" account under the heading of "Machinery and Tools." No credit will be allowed for items which have been absorbed in operations.

No credit will be allowed to the Panama Railroad at the time equipment is turned in, but since both Panama Railroad and Panama Canal equipment will be stored together, if Panama Railroad equipment should be issued to The Panama Canal or *vice versa*, financial accounting between the two interests must follow at values fixed by the Board of Appraisal.

Charges for depreciation and reserve for repairs will be discontinued when equipment is turned in.

JAY J. MORROW, *Governor.*

Act of Congress—Army Appropriation—1922.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 20, 1921.

CIRCULAR No. 600-81:

The extracts from an Act of Congress quoted below are published for the information of all concerned.

JAY J. MORROW, *Governor.*

AN ACT Making appropriations for the support of the Army for the fiscal year ending June 30, 1922, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the support of the Army for the fiscal year ending June 30, 1922, namely:

* * * * * * *

MEDICAL DEPARTMENT.

MEDICAL AND HOSPITAL DEPARTMENT.

For the manufacture and purchase of medical and hospital supplies, including disinfectants, for military posts, camps, hospitals, hospital ships and transports, for laundry work for enlisted men and Army nurses while patients in a hospital, and supplies required for mosquito destruction in and about military posts in the Canal Zone; * * * $2,000,000.

* * * * * * *

HOSPITAL CARE, CANAL ZONE GARRISONS.

For paying the Panama Canal such reasonable charges, exclusive of subsistence, as may be approved by the Secretary of War for caring in its hospitals for officers, enlisted men, military prisoners, and civilian employees of the Army admitted thereto upon the request of proper military authority, $60,000; *Provided,* That subsistence of the said patients, except commissioned officers, shall be paid to said hospitals out of the appropriation for subsistence of the Army at the rates provided therein for commutation of rations for enlisted patients in general hospitals.

* * * * * * *

Approved, June 30, 1921.

Wage and Complaints Boards.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 28, 1921.

To all concerned—Effective this date, and during the absence of Mr. W. C. Hushing on leave, Mr. H. A. McConaughey will act as a member of the Wage Board and Mr. H. J. White as a member of the Complaints Board.

JAY J. MORROW,
Governor.

Acting General Manager, Commissary Division.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 28, 1921.

All concerned—Mr. Roy R. Watson will act as General Manager of the Commissary Division during the absence on leave of Mr. J. J. Jackson, effective August 1, 1921.

R. K. MORRIS,
Chief Quartermaster.

Approved:
JAY J. MORROW,
Governor.

Acting District Quartermaster at Cristobal.

THE PANAMA CANAL,
SUPPLY DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 29, 1921.

All concerned—Mr. Max Herz is designated as Acting District Quartermaster at Cristobal during the absence on leave of Mr. J. M. King, effective July 29.

R. K. MORRIS,
Chief Quartermaster.

Classified Employees Who Engaged in "War Work."

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., July 14, 1921.

To all concerned—Under date of May 31, 1921, the President issued the following Executive Order, in the interest of classified employees who left the service to engage in distinctive war service with the various welfare organizations, during the war. This Executive Order supersedes that of March 30, 1920:

"In the discretion of the Civil Service Commission, the time during which persons formerly in the competitive classified service served with organizations doing distinctive war service shall not count against their period of eligibility under Civil Service rule IX for reinstatement, nor against their eligibility under Civil Service rule X for transfer, provided they have had continuous service."

The following statement explanatory of this Executive Order is quoted from a letter from the Civil Service Commission, to the Chief of Office, The Panama Canal, Washington, D. C., under date of June 10, 1921:

"Many competitive, classified employees resigned to accept service with organizations such as the American Red Cross, the Y. W. C. A., and other organizations engaged in war work, but were not assigned to duty overseas or on high seas. Their services, however, were no less important because they were not so assigned. The necessity arose for the building up of efficient organizations for distinctive war work, requiring the services of trained and efficient employees with executive ability, and employees in the classified service met those requirements. It is believed to be desirable, in the interests of the service to preserve the status of such employees, under the Civil Service rules so far as possible, and the Executive Order which is enclosed grants the same privileges to former employees who served in this country as were given to those who served overseas or on the high seas. To be eligible for transfer, however, an employee must have had continuous service."

C. A. MCILVAINE,
Executive Secretary.

Acting Local Agent, Panama.

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
BALBOA HEIGHTS, C. Z., July 13, 1921.

All concerned—Effective on Thursday, July 14, 1921, and during the absence of Mr. A. B. Goodenow on leave, Mr. E. Arosemena will be Acting Local Agent at Panama City.

S. W. HEALD,
Superintendent.

Acting Chief Plumbing Inspector.

THE PANAMA CANAL,
DEPT. OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., July 12, 1921.

All concerned—During the absence of Mr. J. J. Reidy on leave, Mr. Wm. Fullman will perform the duties of Chief Plumbing Inspector.

Effective July 12, 1921.

G. W. GREEN,
Municipal Engineer.

Acting Chief Quarantine Officer.

THE PANAMA CANAL,
HEALTH DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 19, 1921.

To all concerned—Effective this date, Dr. J. D. Odom will act as Chief Quarantine Officer, in addition to his regular duties, during the absence of Dr. W. C. Rucker on official duty inspecting ports in Venezuela.

H. C. FISHER,
Chief Health Officer.

Acting Superintendent, Pacific Locks.

THE PANAMA CANAL,
DEPT. OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., July 23, 1921.

All concerned—Effective July 29, 1921, and during the absence of Mr. W. R. Holloway on leave, Mr. J. C. Myrick will act as Superintendent of the Pacific Locks.

M. L. WALKER,
Engineer of Maintenance.

Hogs For Sale.

The following hog stock is offered for sale, f. o. b. the Margarita hog farm:

6 grade boars, three-quarters Duroc, 1 year old.

14 grade boars, bred from three-quarters Duroc sow and full-blooded Hampshire boar, from 3 to 6 months old.

3 boars, seven-eighths Duroc, 4 to 5 months old.

For further information inquire at the Cattle Industry office in Cristobal.

Rainfall from June 1 to June 30, 1921, Inclusive.

STATIONS.	Maximum in 1 day.	Date.	Total.
Pacific section:	*Ins.*		*Ins.*
Balboa	2.20	11	7.20
Balboa Heights	2.23	11	7.86
Miraflores	1 40	11	7.67
Pedro Miguel	1 93	28	9.81
Rio Grande	1 86	5	8 89
Central section:			
[1] Culebra	1.53	15	9 51
[1] Camacho	1.50	15	8 78
Empire	1 41	5	9 36
Gamboa	2 49	3	12.81
[1] Juan Mina	3 60	5	11.87
Alhajuela	2 53	15	9.57
[1] Vigia	1.47	4	8.90
[1] Trinidad	2 54	24	10 16
[1] Monte Lirio	2 32	5	15.23
Atlantic section:			
Gatun	3.76	15	13 23
[1] Brazos Brook	2.70	5	14.05
Colon	2 40	15	14 02
Porto Bello	4.32	21	19.67

[1] Standard rain gauge—readings at 5 p. m. daily.
[2] Standard rain gauge—readings at 8 a. m. daily.
Automatic rain gauge at unstarred stations—values, midnight to midnight.

June Rainfall for Three Years.

STATIONS.	INCHES. 1919	1920	1921	Station average.	Years of record.	Rainy days, 1921
Pacific section:						
Balboa	7.75	4.42	7.20	7 20	25	23
Balboa Heights	8 93	4.83	7.86	7.46	24	22
Miraflores	4 60	9.87	7.67	8.35	13	27
Pedro Miguel	3.99	10.02	9.81	9.12	14	26
Rio Grande	6 23	11.78	8.89	9.12	17	25
Central section:						
Culebra	5 73	12.08	9 51	8.87	30	28
Camacho	6 77	11.83	8 78	9.64	15	23
Empire	5 57	11.01	9 36	8 69	18	25
Gamboa	6.02	7.48	12.81	9.70	40	27
Juan Mina	5.50	5.78	11.87	10.20	11	21
Alhajuela	6 87	11 16	9 57	12.06	22	27
Vigia	7.07	10 23	8.90	12 40	13	27
Frijoles	5.85	10.20	16 49	10.42	10	. .
Trinidad	12.30	10.63	10.16	10.33	14	26
Monte Lirio	8.16	7.86	15.23	12 20	14	25
Atlantic section:						
Gatun	12 54	7.38	13 23	12 35	17	24
Brazos Brook	11.70	7.96	14.02	13.94	15	24
Colon	12.08	13.29	15.18	13.39	51	25
Porto Bello	10 04	20.17	19.67	16.17	10	26

Misdirected Letters.

BALBOA HEIGHTS, C. Z., July 23, 1921.

Insufficiently addressed mail matter for the following has been received in the office of the Director of Posts and may be obtained upon request of the addressee. Request for forwarding may be made by telephone, calling Balboa 182:

Allen, William
Allen, Henry William Banman
Archer, W. T.
Armistrod, Miss Cara
Arnold, Harry L.
Bitton, R.
Carabatsin, Jacovon [1]
Church, L. H.
Crunn, A. A.
Deakin, Mr. and Mrs. F. B.
Davis, Reuben S.
Dixon, Mr. and Mrs. W. L.
Eeland, H. F.
Edgar, Robert B.
Erdman, B. J.
Harrison, Ethelbert
Hilders, Joseph A., Box 297.
McCormack, Dr. John J.
Marry, Mrs. James
Maxon, Ernest E.
Naegele, Ferdinand
Pablo, Juan J.
Payne, D.
Peterson, Mrs. T. J., Box 262.
Portage, Guillermode. [2]
Rankin, E. B.
Runion, Mrs. Matilda
Sinor, Buimett
Snyder, George [1]
Stone, Mrs. C. W.
Worthington, Mrs. Lula E., care Mary Walsh
Walcott, Edward

[1] Special delivery letter. [2] Parcel.

Additions to Commissary Stock.

Dry Goods Section.

Cloth, casement, yd	$0.17
Books, household expense, ea	1.00
Buttons, pearl, doz	.05
Corsets, Ferris, style No. 950, ea	2.00
Essence, Coty's, Origan L'or, bot	3.60
Essence, Coty's, Rose Jacqueminot, bot	3.20
Essence, Coty's, Lilas Pourpre, bot	3.20
Essence, Coty's, Violette Pourpre, bot	3.20
Essence, Coty's, Jasmin de Corse, bot	3.35
Essence, Coty's, Iris, bot	3.20
Gloves, white, pair	.16
Lotion, Houbigant's, Quelpues Fleurs, bot	2.35
Lotion, Houbigant's, Eau de Toilette, bot	3.90
Lotion, Houbigant's, Royal Houbigant, bot	1.50
Lotion, Coty's, Origan, bot	1.80
Lotion, Coty's, Rose Jacqueminot, bot	1.80
Lotion, Coty's, Jasmin de Corse, bot	1.80
Lotion, Coty's, Lilas Pourpre, bot	1.80
Napkins, Damask, linen, 5/8, ea	1.05
Napkins, Damask, linen, 5/8, ea	.64
Napkins, Damask, linen, 5/8, ea	.61
Napkins, Damask, linen, 3/4, ea	1.35
Needles, sewing, Roberts', paper	.08
Pencils, Auto Sharp, ea	$0.98, $1.15, $1.55, $1.85
Perfume, Houbigant's, Jasmin Flora, bot	5.00
Perfume, Houbigant's, Parfum Ideal, bot	5.00
Pongee, Plaza, yd	.17
Tablecloths and napkins, set	$25.20, $27.85, $28.80, $30.25
Water, toilet, Houbigant's, Eau de Toilette, bot	$3.15
Water, toilet, Houbigant's, Eau de Cologne, bot	3.15
Water, toilet, Coty's, Origan, bot	2.95
Water, toilet, Coty's, Rose Jacqueminot, bot	3.35
Water, toilet, Coty's, Jasmin de Corse, bot	2.95
Water, toilet, Coty's, Lilas Pourpre, bot	2.95

Grocery Section.

Strawberries, 2s, tin	.30
Relish, sweet, 16-oz. bot	.40

Hardware Section.

Boards, ham, ea	.35
Cutters, combination biscuit and doughnut, ea	.17
Cookers, steam, Conservo, No. 9, ea	8.35
Cookers, steam, Conservo, No. 20, ea	10.85
Casseroles, aluminum, with stands, ea	2.70
Roasters, oval, No. 50, ea	4.05

PANAMA RAILROAD PASSENGER TRAIN TIME-TABLE No. 33, EFFECTIVE AUGUST 7, 1921.

MAIN LINE STATIONS.	DAILY.		
	3	5	7
Leave	A. M.	A. M.	P. M.
Colon	7.10	11.00	5.00
Mount Hope	7.15	11.05	5.05
Fort Davis	7.24	11.14	5.14
Gatun	7.29	11.19	5.19
Monte Lirio	7.44	11.34	5.33
Frijoles	7.55	11.45	5.44
Darien	8.00	11.52	5.51
		P. M.	
Gamboa	8.16	12.04	6.04
Summit	8.32	12.16	6.16
Pedro Miguel	8.46	12.27	6.26
Red Tank	8.49	12.30	6.28
Miraflores Locks	8.53	12.34	6.32
Fort Clayton	8.56	12.37	6.35
Corozal	9.00	12.41	6.40
Balboa Heights	9.05	12.50	6.45
Panama	9.10	12.55	6.50
Arrive	A. M.	P. M.	P. M.
	3	5	7

MAIN LINE STATIONS.	DAILY.		
	4	6	8
Leave	A. M.	A. M.	P. M.
Panama	7.10	11.00	5.00
Balboa Heights	7.15	11.05	5.05
Corozal	7.21	11.12	5.10
Fort Clayton	7.25	11.16	5.14
Miraflores Locks	7.28	11.19	5.17
Red Tank	7.32	11.22	5.21
Pedro Miguel	7.36	11.25	5.25
Summit	7.48	11.37	5.37
Gamboa	8.00	11.49	5.49
Darien	8.09	11.59	5.59
		P. M.	
Frijoles	8.17	12.07	6.07
Monte Lirio	8.29	12.19	6.18
Gatun	8.44	12.34	6.34
Fort Davis	8.48	12.38	6.38
Mount Hope	8.55	12.45	6.45
Colon	9.00	12.50	6.50
Arrive	A. M.	P. M.	P. M.
	4	6	8

All trains stop where time is shown.

Sunday only	DAILY			Daily except Sunday	DAILY			
67	65	63	61	59	57	55	53	51
A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.	A. M.	A. M.
12.30	11.05	7.30	5.30	3.30	1.00	10.00	7.45	6.10
12.32	11.07	7.32	5.32	3.32	1.02	10.02	7.47	6.12
12.34	11.09	7.34	5.34	3.34	1.04	10.04	7.49	6.14
12.37	11.12	7.37	5.37	3.37	1.07	10.07	7.52	6.17
12.43	11.18	7.43	5.43	3.43	1.13	10.13	7.58	6.23
12.49	11.24	7.49	5.49	3.49	1.19	10.19	8.04	6.29
12.55	11.30	7.55	5.55	3.55	1.25	10.25	8.10	6.35
A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.	A. M.	A. M.
67	65	63	61	59	57	55	53	51

FORT RANDOLPH BRANCH STATIONS	DAILY				Daily except Sunday	DAILY			Sunday only
	52	54	55	58	60	62	64	66	68
Leave / **Arrive**	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.
Third Street, Colon	7.05	8.40	10.55	1.55	4.25	6.25	8.25	11.59	1.25
Seventh Street	7.03	8.38	10.53	1.53	4.23	6.23	8.23	11.57	1.23
Cristobal Commissary	7.01	8.36	10.51	1.51	4.21	6.21	8.21	11.55	1.21
Tower "B"	6.58	8.33	10.48	1.48	4.18	6.18	8.18	11.53	1.18
France Field	6.50	8.25	10.40	1.40	4.10	6.10	8.10	11.45	1.10
Coco Solo Station	6.45	8.20	10.35	1.35	4.05	6.05	8.05	11.40	1.05
Fort Randolph	6.40	8.15	10.30	1.30	4.00	6.00	8.00	11.35	1.00
Arrive / **Leave**	A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.	P. M.	A. M.
	52	54	56	58	60	62	64	66	68

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Volume XIV. Balboa Heights, C. Z., August 10, 1921. No. 52.

British Shipping and the Panama Canal.[1]

In the statistics of the Panama Canal British shipping takes second place immediately after that of the United States. By British is meant Imperial, since Australia, New Zealand, and Canada all contribute materially to the tonnage under the British flag. In the fiscal year 1921 approximately one-third of the whole traffic was British, figured either by the number of vessels, net tons Panama Canal measurement, or tons of cargo. To be accurate, 33 per cent of all vessels passing through the Canal were British, 34 per cent of the total net tonnage was British, and 32 per cent of all the cargo handled was carried in British bottoms. Approximately the same percentages apply for 1918, 1919, and 1920. During the first 3 years of Canal traffic; *i. e.*, 1915, 1916, and 1917, British shipping represented from 41 to 45 per cent of the total. The relative decline is explained by the rapid development of American shipping during and after the war in Europe. The following table shows the number of British vessels passing through the Canal in either direction during the fiscal year since the opening of navigation and the relative importance of British shipping in the total traffic.

BRITISH SHIPPING BY FISCAL YEARS, 1915 TO 1921.

Year.	Atlantic to Pacific.	Pacific to Atlantic.	Total British.	Total all flags.	Percentage British.
1915	226	239	465	1,088	42
1916	193	165	358	787	45
1917	371	409	780	1,876	41
1918	303	396	699	2,130	33
1919	306	296	602	2,025	30
1920	393	360	753	2,478	30
1921	500	472	972	2,892	33
Totals	2,292	2,337	4,629	13,276	34

The development of the traffic in the early years was retarded by slides in the Gaillard Cut. The war at first impeded traffic, and then stimulated it along certain routes. This latter effect is apparent in the figures for 1918, which represent a temporary peak. During the last 3 years there has been a gradual increase in the number and aggregate tonnage of all vessels using the Canal, and a corresponding increase in tonnage under the British flag, which has maintained its relative position. Approximately the same number of British vessels pass the Canal in either direction; but this applies to the aggregate trade only. Over specific trade routes, as shown in the following table, there is often a marked preponderance of traffic in one direction, but since the difference is sometimes on one side and sometimes on the other the total approach a balance.

[1] This is the third of a series of articles on trade through the Panama Canal under different national flags. Those published in previous issues of THE PANAMA CANAL RECORD related to Japanese shipping and to Norwegian shipping.

BRITISH SHIPPING USING THE PANAMA CANAL DURING THE FISCAL YEAR 1921; SEGREGATION BY TRADE ROUTES.

Trade routes.	Vessels.	Cargo tons.
Europe to Far East	1	6,800
Atlantic and Gulf ports of United States to Far East	53	351,494
Far East to Atlantic and Gulf ports of United States	19	100,429
Mexico to Far East	2	22,432
Europe to west coast of South America	64	184,701
West coast of South America to Europe	107	562,549
Atlantic and Gulf ports of United States to west coast of South America	49	144,789
West coast of South America to Gulf ports of United States	45	137,926
Cristobal to west coast of South America	81	40,838
West coast of South America to Cristobal	80	37,117
Mexico to west coast of South America	14	95,660
West coast of South America to Mexico	16	230
East coast of Canada to west coast of South America	2	.....
West coast of South America to east coast of Canada	3	8,095
East coast of South America to west coast of South America	7	3,031
West coast of South America to east coast of South America	1	347
Europe to west coast of Central America	2	2,285
West coast of Central America to Europe	3	4,203
Europe to west coast of Mexico	2	2,123
Cristobal to west coast of Central America	25	16,777
West coast of Central America to Cristobal	30	14,792
Europe to west coast of North America	33	33,564
West coast of North America to Europe	46	347,133
Mexico to west coast of United States	4	34,671
West coast of United States to Mexico	6	.....
Atlantic and Gulf coast of United States to west coast of Canada	6	29,729
East coast of Canada to west coast of Canada	4	536
Cuba to west coast of Canada	1	4,800
West coast of Canada to Mexico	2	.....
East coast of United States to west coast of United States	4	.....
Europe to Australasia	69	385,849
Australasia to Europe	99	564,222
United States to Australasia	63	439,739
Australasia to United States	14	66,872
Canada to Australasia	9	47,513
Cuba to Australasia	4	23,040
New Orleans to Balboa	1	7,183
West coast of United States to South Africa	1	6,323
Totals	972	3,727,792

FIVE PRINCIPAL TRADE ROUTES.

For the period covered by this statement the most important British trade served by the Panama Canal was that between Europe and Australia and New Zealand, with an aggregate cargo tonnage for both directions of 950,000. Second place was taken by the trade between Europe and the west coast of South America with 747,000 cargo tons. Then followed the trade between the United States and Australia and New Zealand, with 506,000 tons; the trade between the United States and the Far East with 451,000 tons; and finally the trade between Europe and the west coast of North America with 380,000 tons. These 5 trade routes account for 81 per cent of all the cargo carried through the Panama Canal under the British flag.

ONE-WAY TRADES.

A few of the principal trades are well balanced, with approximately the same number of vessels and the same tonnage of cargo moving in either direction. This is true of the trade between the Atlantic and Gulf coasts of the United States and the west coast of South America. In other cases, however, there is a marked preponderance of traffic in one direction. For example, there were 53 vessels from the east coast of the United States to the Orient and only 19 from the Orient to the east coast of the United States. A similar preponderance was noted in the case of Japanese vessels in the trade between the eastern seaboard of the United States and the Orient; and it is apparently due to the fact that vessels which go out to the Far East through the Panama Canal commonly return by way of Suez. The two Canals thus

supplement one another, and stimulate a circular around-the-world trade. In the trade between Europe and Australasia there is a similar preponderance but in the opposite direction. There were 69 vessels outward bound against 99 homeward bound. It is known that some of the vessels returning via Panama go out via the Cape of Good Hope or the Straits of Magellan. In the trade between Europe and the west coast of South America there were only 64 outward bound as against 107 homeward bound vessels. Outward voyages via the Straits of Magellan with return via Panama probably account in great part for the difference, although some vessels reach Chile from Australasia and then load nitrate for Europe via Panama.

LEADING BRITISH LINES.

The British company contributing most to Panama Canal traffic is the Pacific Steam Navigation Co., which maintains services from the United Kingdom to South America, New York to South America, Cristobal to South America and Cristobal to Central America. This company put 299 ships through the Canal during the fiscal year 1921. Services between the United Kingdom, Australia, and New Zealand are maintained by Shaw, Saville & Albion, the White Star Line, Commonwealth and Dominion Line, and the New Zealand Shipping Co. The Federal Steam Navigation Co. operates from British ports via New York and the Panama Canal to New Zealand and Australia. The Nautilus Steam Shipping Co. (F. & W. Ritson) maintains a service between the United Kingdom and the west coast of South America. Some of their vessels go out by way of Magellan, but all return via Panama. T. & J. Harrison and Alfred Holt & Co. (Blue Funnel Line) maintain services between Europe and the west coast of North America. The Prince Line has regular sailings from United States Atlantic ports to the Far East. The following is a list of British owners who put 10 or more ships through the Panama Canal during the year:

	Number.
Pacific Steam Navigation Co.	299
Shaw, Saville & Albion	44
White Star Line	18
New Zealand Shipping Co.	43
F. & W. Ritson	36
Commonwealth and Dominion Line	31
Federal Steam Navigation Co.	28
C. T. Bowring & Co.	24
Edward Hain & Son	20
T. & J. Harrison	18
Robert Dollar Co.	16
Ellerman Lines	16
British India Steamship Co.	15
Canadian Government	13
Alfred Holt & Co.	13
Furness, Withy & Co. (Prince Line)	12
Standard Transportation Co.	12
Blue Star Line	10
Andrew Weir & Co.	10

Whole Cargo from Kaanapali.

The steamship *Floridian* passed through the Canal on August 9 with a cargo of 9,000 tons of sugar, shipped from Kaanapali, Maui Island, Hawaii, to Boston.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight August 6, 1921.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Myrmidon	30	14.55	31	6.25	31	13.10	31	14.25	British	Alfred Holt	391.0	49.0	18.0	London	Tacoma	General	1,100	5,221	3,257
Artigas	31	7.07	31	7.24	1	13.23	6	7.40	American	N. Atl. & West. S. S. Co. (S. B.)	390.0	54.0	18.0	Philadelphia	Seattle	General	1,067	6,161	4,427
Moerdijk	31	9.08	31	13.30	31	19.44	31	20.39	Dutch	Holland-American Line	471.0	60.0	18.1	Rotterdam	Vancouver	General	1,600	9,165	6,911
Manavi	27	15.10	1	6.23	1	14.25	1	15.55	British	Pacific Steam Navigation Co	216.0	35.0	12.0	Cristobal	Guayaquil	General	111	1,357	884
Borneo Maru	1	12.15	1	7.36	1	15.18	1	16.35	Japanese	Osaka Shosen Kaisha	385.0	51.0	21.6	New York	Kobe	General	3,374	5,919	4,387
Wilfred	1	6.29	1	8.03	1	16.01	1	17.05	Norwegian	A. S. Det Seimerske Rederi	339.0	48.0	20.6	Hamburg	Corral	General and coal	3,611	4,069	3,107
Neptune [1]	30	15.32	1	11.10	1	18.33	2	14.27	American	United States Navy	520.0	65.0	30.6	Norfolk	Puget Sound	Coal and general	11,558	.....	.....
Sarpfos	31	19.15	1	11.47	1	19.27	1	20.27	Norwegian	Thor Thorsen Line	254.0	39.0	12.1	New York	Guayaquil	General	81	2,064	1,479
Pinola [2]	31	18.05	1	12.08	1	19.29	.....	.....	American	United States Navy	.....	.....	.....	Cristobal	Balboa	.....	.....	.....	.....
Thorbjorg	1	18.45	2	6.20	2	14.32	4	14.00	Norwegian	Johan Waage Bergen	285.0	43.0	16.0	Dunkirk	San Francisco	Ballast	.....	2,113	1,328
Huallaga	23	15.30	2	6.25	2	13.53	2	19.50	Peruvian	Peruvian Steamship Line	360.0	44.7	20.0	Cristobal	Callao	General	168	4,514	2,386
American	2	6.00	2	7.05	2	14.49	2	16.08	American	American-Hawaiian Line	467.0	51.0	21.1	Boston	Tacoma	General	2,560	5,988	4,226
Cristobal	1	19.20	2	8.00	2	16.15	.....	.....	American	Panama Railroad Steamship Line	489.0	60.0	28.1	Norfolk	Balboa	Coal and general	9,441	10,697	8,063
Easterner	2	9.21	2	13.10	2	20.20	3	4.00	American	U. S. A. Line (S. B.)	385.0	51.0	27.0	New York	Melbourne	Oil and general	8,000	5,945	4,524
Neches [1]	2	13.52	3	6.00	3	13.03	.....	.....	American	United States Navy	476.0	56.0	27.3	Norfolk	Balboa	Oil and stores	771	.....	.....
Solana	2	19.54	3	6.18	3	15.17	3	17.57	American	Pacific Mail Steamship Co	435.0	56.6	28.0	Tampico	Iquique	Oil	10,000	7,043	5,041
Seattle Maru	2	16.30	3	6.21	3	13.56	3	15.05	Japanese	Osaka Shosen Kaisha	410.0	51.0	23.6	Buenos Aires	Kobe	General	3,377	6,226	4,001
Canadian Traveller	2	19.30	3	7.10	3	15.35	3	16.41	British	Canadian Government	399.0	52.0	21.0	Port of Spain	Vancouver	Sugar	2,000	5,894	4,143
Grelisle	3	6.26	3	8.35	3	16.29	3	17.32	British	Goulds S. S. Industrial, Ltd.	400.0	52.0	20.9	London	San Francisco	Ballast	.....	5,671	4,017
Aysen	29	17.38	4	6.10	4	13.07	4	14.00	Chilean	South American Steamship Line	379.0	44.0	20.6	Cristobal	Valparaiso	General	1,099	4,535	3,068
Durban Maru	3	19.15	4	6.15	4	14.28	4	15.40	Japanese	Nippon Yusen Kaisha	420.0	56.0	25.1	Galveston	Kobe	General	6,607	7,445	5,345
Hampton Roads	4	9.51	4	10.15	4	18.11	.....	.....	American	Walker & Daley (S. B.)	430.0	59.0	26.6	Tampico	Balboa	Crude oil	9,000	8,093	5,940
Argosy	4	6.44	4	11.00	4	19.04	4	19.56	American	Wessel Duval & Co. (S. B.)	390.0	54.0	18.0	New York	Talcahuano	General	1,600	6,161	4,433
Athenic	3	17.32	4	10.35	4	18.20	4	19.15	British	White Star Line	500.0	63.0	26.11	London	Wellington	.....	.....	12,896	9,571
K. 1. Luckenbach	4	6.44	4	13.07	4	19.37	4	20.25	American	Luckenbach Line	446.0	56.0	21.9	Philadelphia	San Francisco	General	4,600	8,552	6,236
Apus	4	23.30	5	6.58	5	13.11	6	7.33	American	E. C. Evans & Sons (S. B.)	410.0	53.6	16.3	Limerick	San Francisco	Ballast	.....	7,082	5,167
Republic	5	4.50	5	7.20	5	14.57	5	19.35	American	Chile Steamship Co	345.0	49.0	18.1	New York	Valparaiso	Coke and general	2,542	4,623	3,372
Mineola	5	6.04	5	13.10	5	19.25	5	21.00	American	W. R. Grace & Co	298.0	40.0	17.3	New York	Salaverry	General	1,015	2,835	1,822
Mantaro	1	15.25	6	6.15	6	14.46	6	16.20	Peruvian	Peruvian Steamship Line	360.0	46.0	19.6	Cristobal	Ilo	General	124	4,838	2,959
Willsolo	5	14.05	6	6.18	6	13.39	6	14.42	American	Williams Steamship Co	434.0	57.0	20.0	Newport News	Los Angeles	General	4,000	7,983	5,882
Pinola [2]	2	22.00	6	7.30	6	15.15	7	7.25	American	United States Navy	165.0	35.0	17.0	Cristobal	Balboa	.....	.....	.....	.....
Glenpool	6	10.13	6	10.35	6	17.47	.....	.....	American	Standard Oil Co	401.0	53.0	26.4	Baton Rouge	Balboa	Crude oil	7,000	.....	.....

[1] Collier.

[2] Tug, towing barges.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Pomona	30	14.50	31	6.31	31	14.18	5	14.15	American	Williams Dimond Co. (S. B.)	440.0	56.0	27.6	San Francisco	Antwerp	General	10,000	8,301	6,926
Ulysses	30	10.15	31	6.48	31	15.16	2	22.40	Dutch	Royal Netherlands W. I. Mail	343.0	42.0	20.6	Valparaiso	Havre	General	2,479	4,145	3,057
West Keene	31	4.00	31	8.32	31	16.15	31	16.15	American	N. Atl. & West. S. S. Co. (S. B.)	410.5	54.0	16.10	San Francisco	Portland	(6)	1,821	6,547	4,876
Wm. G. Warden	31	7.40	31	10.39	31	17.20	31	18.12	American	Standard Oil Co. of N. J.	500.0	68.2	18.0	Port Lobos	Tampico	Ballast		10,503	7,909
Pinola[3]	31	13.15	31	13.45	31	18.55	1	12.08	American	United States Navy	165.0	35.0	17.0	San Pedro	Cristobal				
China Maru	31	22.00	1	7.55	1	15.42	1	15.54	Japanese	Kawasaki Kisen Kaisha	385.0	51.0	26.0	Portland	Hampton Rds.	Wheat	7,639	5,924	4,395
Mantaro	1	1.00	1	8.26	1	15.25	6	6.15	Peruvian	Peruvian Line	367.3	46.0	18.0	Callao	Cristobal	General	1,627	4,838	3,959
Santa Luisa	1	1.30	1	10.00	1	16.27	1	23.27	American	W. R. Grace & Co.	360.2	51.6	22.6	Talcahuano	New York	General	2,574	5,694	3,975
Suffolk	1	8.00	1	10.08	1	18.36	1	22.20	British	Federal Steam Navigation Co.	460.0	58.5	24.0	Sydney	Liverpool	(7)	5,360	8,975	6,457
Garfield	1	13.45	1	14.00	1	20.40	2	10.20	American	Grace Line, Inc	299.4	45.0	19.0	Salaverry	New York	General	803	3,228	2,010
Alaskan	1	17.25	2	6.19	2	13.55	2	13.55	American	American-Hawaiian Line	470.1	57.2	23.0	Seattle	New York	General	6,000	9,259	8,901
Marie[4]			2	7.00					American	John Morlik				Balboa	Gatun				
Peshawur	2	6.00	2	8.59	2	15.58	2	17.37	British	Peninsuli and Oriental Co.	449.5	58.4	23.5	Wellington	London	Frozen, general	2,852	8,175	5,342
Hokkai Maru	2	8.40	2	10.08	2	18.40	2	20.40	Japanese	Taisho Kaium Kabushiki	369.5	49.8	22.3	Ocean Island	Norfolk	Guano	5,450	4,823	3,462
Lake Gunni	2	0.30	2	10.26	2	19.08	3	12.01	American	Swayne & Holt (S. B.)	253.0	43.8	20.0	San Francisco	New Orleans	General, lumber	2,000	2,915	2,005
Gene Crawley	1	22.00	2	13.38	2	20.45	3	12.01	American	Sinclair Navigation Co.	301.7	43.7	14.0	Corinto	Tampico	Ballast		3,332	2,512
Pinola[3]	1	19.29	2	14.33	2	22.00	6	7.30	American	United States Navy	165.0	35.0	17.0	Balboa	Cristobal				
Hayo Maru	2	12.50	3	6.32	3	14.15	3	14.15	Japanese	Toyo Kisen Kaisha	400.0	53.0	26.0	Valparaiso	New Orleans	Nitrate of soda	6,814	6,186	4,446
Woodarra	2	23.50	3	7.54	3	15.25	3	17.05	British	British India Steamship Co.	449.5	58.2	22.6	Auckland	London	Frozen, general	3,500	8,238	5,313
Lewis Luckenbach	3	4.30	3	9.58	3	17.57	3	17.57	American	Luckenbach Line	496.0	68.2	25.0	San Francisco	New York	General	7,057	11,487	8,732
Mamari	3	9.30	3	10.35	3	19.30	3	21.15	British	Shaw, Savill & Albion Co.	455.4	56.4	26.6	Brisbane	London	(7)	4,887	8,641	6,016
Clemence C. Morse	3	18.15	4	6.25	4	14.32	4	20.00	American	N. Atl. & West. S. S. Co. (S. B.)	402.6	53.2	20.0	Portland, Oreg.	Portland, Me.	General	4,200	6,571	4,853
Balboa	4	10.54	4	12.05	4	18.55	6	21.15	American	Colombian Maritime Co.	190.0	29.1	14.6	Buenaventura	Cristobal	(8)	566	741	350
Salvador	5	6.55	5	9.03	5	15.05			British	Pacific Steam Navigation Co.	215.0	33.0	15.0	Champerico	Cristobal	(9)	677	1,213	672
Colombia	5	4.00	5	12.14	5	18.45	6	13.44	American	Pacific Mail Steamship Co.	380.0	48.7	21.0	San Francisco	Baltimore	General	2,883	6,015	4,281
Cuba	5	17.00	6	6.28	6	14.45			American	Pacific Mail Steamship Co.	307.7	42.2	24.7	San Francisco	Cristobal	General	1,600	3,429	2,206
Quilpue	5	13.40	6	6.40	6	14.40	7	13.20	British	Pacific Steam Navigation Co.	361.0	46.2	21.6	Coronel	New York	General	2,277	4,742	3,023
Robin Goodfellow	6	1.00	6	7.52	6	15.00	6	15.00	American	Robin Steamship Co	424.8	55.2	21.6	Tacoma	Boston	General	5,000	7,473	5,624
Karamea	6	2.00	6	7.57	6	16.00	6	17.10	British	Shaw, Savill & Albion Co.	420.0	54.0	21.6	Dunedin	London	(10)	3,611	7,106	5,073
Gurth	6	0.35	6	8.35	6	16.15	6	18.45	Norwegian	Det. Belmerske Rederi	366.0	49.8	21.6	Talcahuano	London	General	5,256	4,358	3,356
Chile[5]	6	9.25	6	10.03	6	17.24	6	19.50	Danish	East Asiatic Co.	425.3	55.2	29.3	San Francisco	Antwerp	General	9,290	7,382	5,663
Hampton Roads	4	18.11	6	11.22	6	18.46	6	18.46	American	Walker & Daley (S. B.)	431.0	59.2		Balboa	Tecomate, Mex.	Ballast			
Laura C. Hall	6	0.31	6	12.38	6	20.45			British	Pacific Metals Corporation	81.0	25.6	10.0	Buenaventura	Cristobal	Coffee, platinum	67	132	72
Willpolo	6	11.30	6	13.22	6	20.23	6	20.23	American	Williams Steamship Co.	386.8	52.2	22.6	San Francisco	New York	General	5,773	5,680	4,112

[3] Tug. [4] Launch. [5] Motor ship. [6] Wood and canned goods. [7] Cold storage and general. [8] Coffee, hats, ivory nuts, and rubber. [9] Coffee, hides, balsam, etc. [10] Frozen, wool, tallow, oats, etc.

Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

(Continued on page 820, column 2)

Canal Traffic in July.

The traffic through the Canal during July, 1921, was distributed over trade routes as shown in the following tabulation:

ATLANTIC TO PACIFIC.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
United States coastwise:							*Long tons.*
United States	19	79,585	101,924	124,793	79,469	$99,474.75	60,997
From East Coast of United States to Far East:							
Japanese	8	33,741	37,455	49,558	32,483	41,626.80	39,236
British	3	12,952	15,720	18,673	12,073	16,190.00	17,836
United States	2	7,594	10,794	12,339	7,594	9,492.50	13,612
Totals	13	54,287	63,969	80,570	52,150	67,309.30	70,684
From Cristobal, C. Z., to West Coast of South America:							
British	7	5,100	8,381	10,824	5,973	6,047.21	549
Peruvian	2	2,495	5,356	8,049	4,187	3,118.75	609
United States	2	672	700	1,230	744	504.00	.....
Chilean	1	1,811	3,182	3,798	2,272	2,263.75	420
Totals	12	10,078	17,619	23,901	13,176	11,933.71	1,569
From Europe to West Coast of United States:							
Danish	4	17,472	21,007	26,279	17,508	19,428.61	7,051
British	2	6,581	8,451	9,860	6,241	7,397.64	2,500
Norwegian	1	4,509	5,637	7,116	4,493	5,636.25	5,400
United States	1	3,513	4,880	5,647	3,513	4,391.25	2,100
Swedish	1	2,248	4,089	3,767	2,865	2,810.00	2,181
Totals	9	34,323	44,064	52,669	34,620	39,663.75	19,232
From Europe to West Coast of South America:							
British	4	15,963	19,021	25,762	16,036	19,953.75	7,800
French	1	3,638	4,170	5,796	3,689	4,547.50	295
Italian	1	3,149	3,600	5,355	3,160	3,936.25	700
Dutch	1	2,518	2,707	3,375	2,574	3,147.50	3,220
Totals	7	25,268	29,498	40,288	25,459	31,585.00	11,925
From East Coast of United States to West Coast of South America:							
British	3	7,829	10,616	14,461	8,414	9,786.25	3,535
United States	3	6,238	7,923	10,411	6,255	7,797.50	5,687
Totals	6	14,067	18,539	24,872	14,669	17,583.75	9,222
From East Coast of United States to Australasia.							
British	4	15,100	18,800	23,956	15,089	18,875.00	18,983
United States	1	3,604	4,480	5,816	3,604	4,505.00	5,085
Totals	5	18,704	23,280	29,772	18,693	23,380.00	24,068
From Europe to Australasia:							
British	4	24,413	29,486	33,793	21,467	30,297.60	10,846
From Europe to West Coast of Canada:							
British	2	7,571	9,235	12,421	7,609	9,463.75	1,281
Dutch	1	4,474	6,911	7,310	4,495	5,592.50	1,591
United States	1	3,522	4,914	5,652	3,522	4,402.50	485
Totals	4	15,567	21,060	25,383	15,626	19,458.75	3,357
From Cristobal to West Coast of Central America:							
British	3	1,926	2,104	3,468	1,958	2,407.50	1,666
From East Coast of Mexico to West Coast of United States:							
Norwegian	1	4,418	5,043	6,987	4,422	3,630.96	.....
British	1	4,134	5,035	6,684	4,051	5,167.50	8,090
Totals	2	8,552	10,078	13,671	8,473	8,798.46	8,000
From East Coast of Mexico to West Coast of South America:							
British	1	3,391	4,274	5,999	3,684	4,238.75	6,719
United States	1	3,677	4,337	5,950	3,677	4,596.25	7,350
Totals	2	7,068	8,611	11,949	7,361	8,835.00	14,069
From Cristobal to West Coast of United States:							
United States	2	2,977	3,765	4,779	2,973	3,721.25	2,887
From East Coast of Canada to Australasia:							
British	1	5,247	5,296	6,975	5,299	6,355.20	4,495

ATLANTIC TO PACIFIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo.
From East Coast of United States to Hawaii (not coastwise):							*Long tons*
British	1	4,923	5,029	5,275	3,293	$6,034.80	3,494
From East Coast of United States to Alaska:							
British	1	4,124	4,161	5,631	4,124	4,993.20	5,742
From Africa to West Coast of Canada:							
British	1	3,555	4,033	5,492	3,380	4,443.75	...
From East Coast of United States to Balboa, C. Z.:							
United States	1	3,489	4,400	5,638	3,477	4,361.25	956
Mexican coastwise:							
Mexican	4	564	348	1,104	476	433.65	10
From East Coast of Mexico to West Coast of Central America:							
United States	1	2,536	2,512	3,185	2,489	3,014.40	4,545
From East Coast of Mexico to West Coast of Canada:							
British	1	1,455	1,618	2,410	1,460	1,164.96	...
Colombian coastwise:							
British	1	614	622	1,138	603	746.40	682
From East Coast of United States to Society Islands:[1]							
United States	1	16	16	23	16	12.00	...
Local (between Canal Zone ports):							
United States	1	923	950	1,768	981	1,140.00	...
Panaman	1	69	69	123	72	51.75	...
Totals	2	992	1,019	1,891	1,053	1,191.75	...
Warships:							
French[2]	1	...	...	...	...	6,080.00	...
Italian[3]	1	...	...	...	...	1,940.00	...
Totals, July, 1921	105	324,330	403,051	508,670	321,763	405,220.18	258,440
Totals, June, 1921	103	336,515	415,302	520,884	331,420	410,629.32	359,584
Totals, July, 1920	107	...	361,850	469,188	295,519	...	398,317

[1] Yacht. [2] French cruiser of 12,160 tons displacement. [3] Italian cruiser of 3,880 tons displacement

PACIFIC TO ATLANTIC.

From West Coast of United States to Europe:							*Long tons*
United States	8	34,366	44,291	54,171	34,355	$42,957.50	68,079
Japanese	3	12,953	14,630	19,528	12,763	16,023.80	23,341
Danish	3	9,944	12,120	15,216	9,717	12,430.00	21,520
British	2	7,387	8,982	11,498	7,298	9,233.75	14,568
Swedish	1	3,308	4,468	5,235	3,913	4,135.00	7,820
Totals	17	67,958	84,491	105,648	68,046	84,780.05	135,326
United States coastwise:							
United States	15	57,683	70,477	87,977	57,107	72,103.75	92,659
From West Coast of South America to Cristobal:							
British	8	5,649	9,265	11,865	6,588	7,061.25	2,872
Peruvian	3	3,699	7,742	12,452	6,277	4,623.75	4,284
Chilean	2	3,608	6,250	7,612	4,569	4,510.00	695
United States	1	336	350	615	372	420.00	518
Totals	14	13,292	23,607	32,544	17,797	16,615.00	8,369
From Australasia to Europe:							
British	11	61,149	70,124	89,930	58,701	75,450.80	63,747
From West Coast of South America to East Coast of United States:							
United States	5	16,610	21,504	26,755	16,469	20,762.50	27,411
British	3	3,792	5,171	7,102	3,876	4,740.00	4,894
Norwegian	2	5,403	6,317	8,605	5,392	4,879.65	830
Totals	10	25,805	32,992	42,462	25,737	30,382.15	33,125
From West Coast of South America to Europe:							
British	5	16,942	22,561	26,179	16,421	21,177.50	26,436
Italian	2	6,049	8,060	10,530	6,496	7,561.25	2,804
Dutch	1	1,603	3,057	2,655	1,625	2,003.75	2,479
Totals	8	24,594	33,678	39,364	24,542	30,742.50	31,719

PACIFIC TO ATLANTIC—Continued.

Route and registry.	No. of vessels.	United States equivalent.	Panama Canal net.	Registered gross.	Registered net.	Tolls.	Cargo
From Far East to East Coast of United States.							*Long tons.*
United States	3	12,249	14,707	18,389	12,259	$15,311.25	19,437
British	2	7,415	10,201	11,666	7,403	9,268.75	14,585
Japanese	1	4,223	5,140	6,746	4,191	5,278.75	5,897
Totals	6	23,887	30,048	36,801	23,853	29,858.75	39,829
From West Coast of Canada to Europe:							
Dutch	1	5,403	6,612	8,384	5,437	6,753.75	10,677
Swedish	1	3,411	5,661	5,642	4,320	4,263.75	8,041
British	1	2,846	3,697	4,574	2,861	3,557.50	5,537
Totals	3	11,660	15,970	18,600	12,618	14,575.00	24,255
From West Coast of United States to Cristobal, C. Z.:							
United States	2	2,977	3,765	4,779	2,973	3,721.25	1,557
From West Coast of Central America to Cristobal, C. Z.:							
British	2	1,288	1,398	2,298	1,304	1,610.00	1,779
From West Coast of United States to East Coast of Mexico:							
United States	1	8,408	8,409	10,290	7,890	6,306.00	
From Far East to East Coast of Mexico:							
British	1	8,309	9,609	13,056	8,335	6,918.48	
From West Coast of South America to East Coast of Mexico:							
Norwegian	1	4,443	5,105	6,961	4,418	3,675.60	
From West Coast of South America to East Coast of South America:							
French		4,326	4,363	5,923	3,763	5,235.60	4,000
From West Coast of United States to East Coast of South America:							
United States	1	3,842	4,174	4,839	2,978	4,802.50	3,530
From West Coast of United States to East Coast of United States[1]							
British	1	2,650	3,096	4,074	2,587	3,312.50	5,430
Canadian coastwise:							
British	1	1,830	2,042	3,101	1,908	2,287.50	3,240
From West Coast of Central America to East Coast of Central America:							
United States	1	1,434	1,635	2,064	1,434	1,177.20	
From Far East to Europe:							
British	1	1,430	1,427	1,582	1,482	1,712.40	2,350
Colombian coastwise:							
British	1	614	622	1,138	602	746.40	280
From West Coast of Central America to East Coast of United States:							
United States	1	530	530	701	530	397.50	
From West Coast of Canada to East Coast of Canada:							
British	[2]3					2,872.00	
Totals, July, 1921	102	328,109	407,562	514,132	328,605	399,282.93	451,210
Totals, June, 1921	89	277,379	346,175	439,973	279,071	335,421.05	335,136
Totals, July, 1920	99		346,325	456,128	280,766		409,671

[1] For orders. [2] 1 British cruiser of 4,053 tons displacement; and 2 British destroyers of 1,691 tons displacement.

New Johnson Line Motor Ship.

Lloyd's List for July 12, 1921, reports the launching at Copenhagen of the *Cometa*, a motor ship built for the Johnson Line of Stockholm, which will be used in that company's service between Europe and the Pacific Coast of North America via the Panama Canal. The *Cometa* is 367 feet long, has a beam of 51 feet 3 inches, a molded depth of 34 feet, and a deadweight capacity of 6,500 tons. She is the twelfth

of vessels of this type built for the Johnson Line, which now owns more motor ships than any other company with the single exception of the East Asiatic Company of Copenhagen. The Johnson Line has one other motor ship now building and has applied to the Swedish Government for permission to sell its steamers abroad in order that it may make further additions to its fleet of motor ships.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal for Week Ending August 6, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged.	Cargo— Laded.
				Tons.	*Tons.*
Jamaica	Pacific Steam Navigation Co		July 31		¼
Puerto Rico	French Steamship Co		July 31		79
Moerdijk	Holland-American Line	July 31	July 31	8	(2)
Scarpfos	Caribbean Steamship Line	July 31	August 1	20	(2)
Manavi	Pacific Steam Navigation Co		August 1		114
Ulysses	Royal Netherlands W. I. Mail	July 31	August 2	(1)	1,624
Huallaga	Peruvian Line		August 2		171
Quillota	Pacific Steam Navigation Co.		August 2		892
Van Rensselaer	Royal Netherlands W. I. Mail	August 1	August 2	86	(2)
Heredia	United Fruit Co	August 1	August 4	2,397	289
Gen. G. W. Goethals	Panama Railroad Steamship Line	August 1	August 5	1,910	2,050
Mantaro	Peruvian Line	August 1	August 6	1,627½	124
San Blas	United Fruit Co	August 2	August 3	18	48
Pastores	United Fruit Co	August 2	August 3	575	313
Metapan	United Fruit Co	August 3	August 3	2	6
Aysen	Chilean Steamship Line		August 4		1,098
Van Rensselaer	Royal Netherlands W. I. Mail	August 4	August 5	(2)	1,576
Balboa	Caribbean Steamship Line	August 4	August 6	566	53
Colombia	Pacific Mail Steamship Co	August 5	August 6	299	82
Salvador	Pacific Steam Navigation Co	August 5		677	
Lucellum	Anglo-Saxon Petroleum Co	August 6		6,901	
Cuba	Pacific Mail Steamship Co	August 6		2,600	
Laura C. Hall	Pacific Metals Corporation	August 6		67	
Camden	United Fruit Co	August 6		8,870	
Point Adams	Pacific Mail Steamship Co	August 6		90	
Camito	Elder & Fyffes, Ltd	August 6	August 6	10	1
Quilpue	Pacific Steam Navigation Co	August 6		137	

[1] No cargo discharged. [2] No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa for Week Ending August 6, 1921.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo— Discharged.	Cargo— Laded.
				Tons.	*Tons.*
Wm. G. Warden	Standard Oil Co	July 31	July 31	14	
Manavi	Pacific Steam Navigation Co	August 1	August 1		4
Santa Luisa	Grace Line	August 1	August 1	8	
Cristobal	Panama Railroad Steamship Line	August 2		9,441	
Lewis Luckenbach	Luckenbach Line	August 3	August 3	1	
Neches[1]	United States Navy	August 3		7,000	
Hampton Roads	United States Shipping Board	August 4		9,000	
Colombia	Pacific Mail Steamship Co	August 5	August 5	182	
Cuba	Pacific Mail Steamship Co	August 5	August 6	27	4
Quilpue	Pacific Steam Navigation Co	August 5	August 6	219	
Laura C. Hall	Pacific Metals Corporation	August 6	August 6	3	

[1] Tanker.

Ships at Canal Repair Shops.

The following vessels were at the Balboa shops for repairs during the week ended August 6:

Mine planter *Graham*, dock, stage, and clean and paint bottom; repair propellers and shafts; renew rings in balance pistons, both main engines; renew disks in both throttles; overhaul 2 turbine blowers; overhaul fuel oil pump; renew piston and rings in circulating engine; bore water end cylinder of feed pump and overhaul valves in 2 manifolds; fit and install 2 piston rods in sanitary pump; manufacture miscellaneous handles, strainers, air vanes and extension pipe sockets for fuel-oil system, and overhaul 2 brass burner connections; clean strainers and grind-in all

sea valves; renew all bad order zincs and electric-weld shell plates in hull; raise rudder, bush gudgeons, and dress pintles as necessary; calk bunker bulkheads where leaking; fair air-tight doors in fireroom and reverse same; overhaul fastenings and fit up doors air-tight; renew lining and grates in starboard galley range and furnish 6 rings and covers for ranges; recanvas top of after deck house; manufacture 1 canvas awning for main deck, forward; steamship *Cristobal*, manufacture 6 snap rings for starboard H. P. engine and 1 wrench for cylinder head nuts; remetal H. P. cross-head brasses of main engines; bore out cylinder, install liner, and renew thrust collar on worm shaft of anchor windlass; weld crack in condenser of refrigerating system; perform miscellaneous engineer's department work: overhaul and free up operating gear to engine room skylight and skylight to crew's quarters; make necessary repairs to miscellaneous bulkheads; manufacture and install steel locker in fireroom, after port side; perform miscellaneous deck and steward's department work; dredge *Paraiso*, dock, stage, and clean and paint bottom; examine and repair sea valves as required; renew wood fenders on stern and around spud wells; remove old and install new spud well liners and casting; renew all broken angles, redrive loose rivets, stop leaks, and remove and replace drainage plugs in hull; steamship *Artigas*, reface, rebore, and renew bolts for port crank pin brasses on after capstan, and acetylene-weld broken port cylinder head on after capstan; open up main condenser, repack all tubes, both ends, and assemble and test after repairs; crane *Ajax*, dock, stage and clean, paint bottom and overhaul all sea valves; launch *Pacific*, general repairs to hull; steamship *William G. Warden*, crane service.

PREVIOUSLY REPORTED.

Steamships *Panama*, reboilering and general overhaul to machinery and hull; *Gen. George W. Getty*, miscellaneous engineer's department and hull repairs; U. S. subchaser *V–12*, docking and general repairs to hull and machinery; tug *Coco Solo*, manufacture 3 eccentric rods for generators and electric weld back end of boilers; launches *Aguila*, line up main engine; *P–1*, rebuilding of hull.

The following vessels were at the Cristobal shops for repairs during the week ended August 8:

Steamships *General G. W. Goethals*, *Cristobal*, *Allianca*, and *General H. F. Hodges*, miscellaneous repairs and painting to engine, deck, and steward departments; *Mantaro*, weld over rivets in corners of center chambers port boiler; repair 2 small stretching screws for engine telegraphs; supply 20 feet of brass chain for telegraphs; repair pressure gauge pipe, port boiler; clean stokehold tank tops and bilges; *Balboa*, repair vent pipe and scale boiler; *Colombia*, services of diver to examine bottom; motor ship *Anam*, make 4 thrust shoes and 4 rollers; steamship *Point Adams*, repair air tank in fuel-oil system, repair feed pump; motor schooner *Laura C. Hall*, remetal shaft bearing; steamships *Lucellum*, repair copper pipe, repair pump; *Cuba*, reseat surface and bottom blows on starboard boiler; *Aysen;* and launch *Redman*, minor repairs.

PREVIOUSLY REPORTED.

Steamship *Astmahco III*, remetal crank brass main engine, etc.; U. S. S. *Pinola*, manufacture one valve stem guide, etc.; steamship *Caribbean*, miscellaneous repairs, including dry-docking; *Pomona*, remetal crank pin brass dynamo engine, etc.; motor ship *Satoe*, general overhauling, including dry-docking; barge *No. 117*, renew plates, etc.; U. S. S. *Forse*, miscellaneous repairs, including dry-docking; barge *No. 19*, renew plates, etc; U. S. submarine *R–25* (at Coco Solo), renew defective rivets in engine foundation and general repairs; motor ship *Lima*, general overhauling, including dry-docking; tug *Tavernilla*, removing and true-up rudder shaft, dry-docking, and miscellaneous repairs.

Vacation Resort.

In connection with the work of the committee appointed to investigate the possibility of establishing a vacation resort for Canal employees and their families in some high altitude, the Governor has approved the recommendation of the committee that The Panama Canal should limit its endeavors to procuring as low rates as possible to Costa Rica or other places where it may be desirable to spend vacations, and encouraging the local authorities at such places to make proper provisions in the way of accommodations and sanitation. This recommendation was made in view of the fact that it seems impracticable to establish a camp or resort of any kind under the jurisdiction of The Panama Canal.

September Tide Table.

Tides—Tidal fluctuations at the Atlantic entrance to the Canal are too small to affect navigation, as the maximum tidal range of record is only about 2 feet.

Panama (Balboa) tide predictions are given below:

Day of— W.	Day of— Mo.	Time and Height of High and Low Water.				Day of— W.	Day of— Mo.	Time and Height of High and Low Water.				Day of— W.	Day of— Mo.	Time and Height of High and Low Water.			
Th	1	2:30	8:56	**2:54**	**9:21**	S	11	4:53	11:07	**5:34**	**11:54**	W	21	5:58	**12:16**	**6:17**	.....
		16.1	0.7	**16.7**	**-0.3**			5.0	12.3	**4.5**	**12.1**			15.9	**1.0**	**15.3**	.....
F	2	3:21	9:46	**3:45**	**10:06**	M	12	6:03	**12:25**	**6:40**	..	Th	22	0:36	6:34	**12:53**	**6:54**
		17.1	-0.5	**17.5**	**-1.3**			5.2	**12.3**	**4.5**	..			1.7	15.6	**1.5**	**14.9**
S	3	4:11	10:30	**4:34**	**10:51**	Tu	13	0:59	7:08	**1:23**	**7:40**	F	23	1:12	7:13	**1:37**	**7:35**
		17.8	-1.3	**17.9**	**-1.7**			12.5	4.8	**12.8**	**4.0**			2.3	15.2	**2.2**	**14.4**
S	4	4:59	11:15	**5:23**	**11:33**	W	14	1:50	8:04	**2:09**	**8:29**	S	24	2:01	7:55	**2:30**	**8:25**
		18.1	-1.5	**17.9**	**-1.5**			13.2	4.1	**13.4**	**3.3**			3.0	14.5	**2.9**	**13.8**
M	5	5:46	11:59	**6:09**	.....	Th	15	2:31	8:49	**2:49**	**9:10**	S	25	3:00	8:50	**3:33**	**9:26**
		18.0	-1.2	**17.5**	....			13.9	3.2	**14.0**	**2.5**			3.7	13.8	**3.4**	**13.3**
Tu	6	0:17	6:31	**12:44**	**6:55**	F	16	3:07	9:27	**3:25**	**9:46**	M	26	4:10	10:03	**4:44**	**10:50**
		-0.8	17.5	**-0.4**	**16.7**			14.6	2.3	**14.6**	**1.8**			4.0	13.3	**3.5**	**13.2**
W	7	1:02	7:16	**1:31**	**7:40**	S	17	3:42	10:02	**3:59**	**10:19**	Tu	27	5:23	11:31	**5:56**	..
		0.4	16.5	**0.8**	**15.6**			15.2	1.6	**15.1**	**1.3**			3.8	13.5	**3.2**	.....
Th	8	1:50	8:01	**2:24**	**8:27**	S	18	4:16	10:35	**4:34**	**10:52**	W	28	0:10	6:36	**12:44**	**7:07**
		1.8	15.3	**2.1**	**14.3**			15.6	1.1	**15.4**	**1.1**			13.9	3.1	**14.3**	**2.4**
F	9	2:45	8:50	**3:22**	**9:22**	M	19	4:50	11:08	**5:08**	**11:25**	Th	29	1:17	7:42	**1:45**	**8:08**
		3.1	14.0	**3.3**	**13.1**			15.9	0.9	**15.5**	**1.0**			15.0	2.0	**15.4**	**1.3**
S	10	3:46	9:50	**4:26**	**10:33**	Tu	20	5:24	11:42	**5:42**	**11:58**	F	30	2:12	8:39	**2:40**	**9:01**
		4.3	12.9	**4.1**	**12.3**			16.0	0.8	**15.4**	**1.2**			16.1	0.8	**16.4**	**0.3**

The tides are placed in the order of their occurrence; the *times* of high and low tides are shown on the upper lines. The figures in boldfaced type are hours and elevations between noon and midnight; *ante meridian* figures are given in the ordinary lightfaced type. The time is Cosmopolitan Standard for the meridian 75° W.

The *elevations* of the water are shown on the second line for each day; a comparison of consecutive heights will indicate whether it is high or low water. Heights are reckoned from mean low water springs, which is 8.3 below mean sea level and is the datum of soundings on the Coast and Geodetic Survey charts for this region. The depth of water may accordingly be estimated by adding the tabular height of the tide to the soundings, unless a minus (−) sign is before the height, in which case it is to be subtracted. The annual inequality or variation in the mean sea level is included in the predictions.

Commissary Delivery Service Changes.

The attention of commissary customers is invited to the following bulletin published under date of August 4, 1921:

THE PANAMA CANAL,
COMMISSARY DIVISION, SUPPLY DEPARTMENT,
BULLETIN No. 823–22. CRISTOBAL, C. Z., August 4, 1921.

To all concerned—Effective August 15 (affecting orders taken previously for that day), the following charges are established for commissary deliveries and all previous bulletins in conflict with this one may be considered canceled:

Ice (special and emergency deliveries)—"Emergency" on regular delivery 70 cents per 100 pounds (without delivery charge). Special delivery—Twenty-five cents per 100-pound piece or less; 40 cents for 110 to 300-pound pieces; 40 cents for each additional 300-pound block, or less.

Ice cream (special deliveries)—Twenty-five cents for 5-gallon containers, or smaller; 40 cents for each container of more than 5-gallon capacity.

Special deliveries—Twenty-five cents for one or two items; 5 cents for each additional item.

Regular deliveries—Fifteen cents for each regular daily delivery, except of standing orders for pasteurized milk and ice. Grocery orders to the value of less than $5 will be treated and charged for as special deliveries, and not regular deliveries.

In the case of collections for regular daily deliveries, which is a new departure, solicitors and order clerks will add this charge to the cold storage paid order and collect it at the time orders are taken. When sales are made over the counter and delivery is requested, salesmen will issue paid order for the collection, and register it in the usual manner. A copy of the paid order will be attached to the daily report and will be a debit to the section and a credit to delivery service. A copy of the paid order should also accompany the goods.

In the unusual event that nothing is to be delivered except pasteurized milk, on standing order, no charge is to be made.

ROY R. WATSON, *Acting General Manager.*

Official Circulars.

Labor Train Discontinued.

THE PANAMA CANAL,
EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., August 1, 1921.

To all concerned—Effective September 1, 1921, the Balboa shops' labor train will be discontinued. Employees who desire a transfer of quarters from Ancon to Balboa should have no difficulty in arranging the transfer within a comparatively short time after making application to the district quartermaster, Balboa Heights.

JAY J. MORROW,
Governor.

Misdirected Letters.

Insufficiently addressed mail matter for the following has been received in the office of the Director of Posts and may be obtained upon request of the addressee. Request for forwarding may be made by telephone, calling Balboa 182.

Almond, Miss Blanche, Box 722
Britt, Chas.
Burns, J. W.
Cariffe, J. V.
Cass, Ralph, Box 134
Clayton, Murry
Day, Robert
Day, William T.
Dodson, Charles, Box 787
Faby, Mrs. M. E.
Fernandez, Luis A.
Griffith, Rev. J. F. F.
Haywood, Thomas J., Box 578
Hendrix, Wm. H.[1]
Irwin, Mr. and Mrs. Joe
Kelts, Alfred
Marsh, B. F.[1]
Mott, C. F.
Neblett, Jeremiah, Box 687
Roach, J. R. H., Box 997
Robles, David, Box 888
Slack, Miss Helen
Stribling, T. S.
Sylvester, J. J. L., Box 861
Wallin, A. L., Box 845
Wilson, Miss L., Box 765

[1] Paper.

Hogs For Sale.

The following hog stock is offered for sale, f. o. b. the Margarita hog farm:

6 grade boars, three-quarters Duroc, 1 year old.

14 grade boars, bred from three-quarters Duroc sow and full-blooded Hampshire boar, from 3 to 6 months old.

3 boars, seven-eighths Duroc, 4 to 5 months old.

For further information inquire at the Cattle Industry office in Cristobal.

Postal Addresses of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

Additions to Commissary Stock.

Dry Goods Section.

Dimity, printed, yd	$0.40
Sheeting, cotton, 72", unbleached, yd	.54
Sheeting, cotton, 54", unbleached, yd	.42
Skirting, sateen, yd	.40
Skirting, sateen, Derby, yd	.47
Voile, Deauville, yd	.27
Voiles, printed, Toulon, yd	.44

Hardware Section.

Holders, soap, ea	.57
Rods, curtain, Perfection, ea	.36
Twine, sail, ½-lb. ball	.12

MOVEMENTS OF OCEAN VESSELS.

—Continued from page 813.

PORT OF CRISTOBAL.

*ARRIVALS.

Date.	Vessel.	Line.	From—
July 31	Metapan	United Fruit Co	New Orleans.
July 31	Yosemite	Thorndyke & Trenholm (S. B.)	High seas.
August 1	Gen. G. W. Goethals	Panama Railroad Steamship Line	New York and Haiti.
August 1	Heredia	United Fruit Co	New Orleans.
August 1	Van Rensselaer	Royal Netherlands W. I. Mail	Amsterdam.
August 1	Pastores	United Fruit Co	New York.
August 2	San Blas	United Fruit Co	Boston.
August 3	Metapan	United Fruit Co	Bocas del Toro.
August 4	Van Rensselaer	Royal Netherlands W. I. Mail	Port Limon.
August 6	Camito	Elders & Fyffes, Ltd	Port Limon.
August 6	Camden	United Fruit Co	Tampico.
August 6	Lucellum	H. E. Moss & Co	Curacao.

*DEPARTURES.

Date.	Vessel.	Line.	For—
July 31	Yosemite	Thorndyke & Trenholm (S. B.)	Dublin.
July 31	Puerto Rico	French Line	
July 31	Metapan	United Fruit Co	Bocas del Toro.
August 2	Van Rensselaer	Royal Netherlands W. I. Mail	Port Limon.
August 3	Metapan	United Fruit Co	New Orleans.
August 3	Pastores	United Fruit Co	New York via Limon and Habana.
August 3	San Blas	United Fruit Co	Boston.
August 4	Hannibal	United States Navy	High seas.
August 4	St. Mihiel	United States Army	New York.
August 4	Heredia	United Fruit Co	New Orleans via way-ports.
August 5	Van Rensselaer	Royal Netherlands W. I. Mail	Puerto Colombia.
August 5	Gen. G. W. Goethals	Panama Railroad Steamship Line	New York.
August 6	Camito	Elders & Fyffes, Ltd	Kingston.
August 6	Astmaheo III	Astoria Mahogany Co	Colorado Bar.

*Other than ships passing through the Canal.

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A

Acts of Congress:
- Amendment to Edge Act, 510.
- Army Appropriation, 1922, 805.
- Appropriation for American seamen, 517.
- Appropriation for annual payment to Panama, 517.
- Deficiency Appropriation, 1921, 503.
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